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ABSTRACT

Materials contained in this guide are designed to be used in planning a comprehensive career education program and for developing individual career education units for grades 6-9. Section 1 is the planning guide and contains strategies for organizing, planning, and implementing a program, developing staff inservice, conducting a needs assessment, identifying resources, and preparing a resource center. There are also suggestions for involving the community, parents, and students in the planning and implementation process, and tips for conducting field trips and interviews. Section 2 provides curriculum guides for five selected occupational cluster units: applied biological and agricultural occupations; business, marketing, and management occupations; health occupations; industrial oriented occupations; and personal and public service occupations. Each unit provides a preface containing background information, and outlines subject matter area relationships, career development focus, occupational titles, teaching strategies, introductory activities, and individual and/or small group activities in which the student gathers information relevant to the occupations and refines the career development concepts. (The units are not lesson plans but they do contain the elements necessary to develop lesson plans appropriate to individual classes.) Section 3 provides a bibliography of resources appropriate for development of a career exploration curriculum, including books, audio-visuals, pamphlets, and sources of free and inexpensive materials. (TA)

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Career Exploration
Occupational Information
for the
Junior High/Middle School

A
Planning Curriculum Guide

by

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1977

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TABLE OF CONTENTS

Overview of Project iv

Field Testing vi

I. Planning Guide 1

A. Purpose 2

B. Introduction to Career Education 5

C. Growth and Development of the 11-14 Year Old Student Related to Career Education Experiences 10

D. Role of "Significant Others" in Career Development 12

E. Implementing a Career Exploration Program in the Junior High/Middle School 15

II. Curriculum Guides 47

Introduction to the Occupational Cluster Curriculum Guide 48

Introductory and Concluding Units for a Career Exploration Program for Junior High/Middle Schools 55

A. Applied Biological and Agricultural Occupations Units

1. Animal Production 69
2. Plant Production 73
3. Supplies 77
4. Services 81
5. Mechanics 85
6. Products (Processing) 89
7. Ornamental Horticulture 93
8. Renewable Natural Resources 97
9. Forestry 103

B. Business, Marketing and Management Occupations Units

1. Clerical-Bookkeeping/Accounting-Secretarial 109
2. Electronic Data Processing 115
3. Promotion and Marketing Research 119
4. Purchasing and Sales 123
5. Distribution (Transportation, Storage and Stock Control) 127
6. Top Management 131
7. Personnel Management 137
8. Production Management 141
9. Finance, Credit, and Insurance 145

C. Health Occupations Units

1. Medical 151
2. Dental 155
3. Nursing 161
4. Health and Medical Research and Communications 165
5. Physical, Mental and Social Rehabilitation 169
6. Clinical Laboratory and Related Technical 175
7. Environmental and Public Health 179
8. Administrative, Business and Clerical 183
9. Other Related Health Specialities 187

D. Industrial Oriented Occupations Units

1. Construction Trades - Builders 193
2. Construction Trades - Finishers 197
3. Extraction of Raw Materials 201
4. Manufacturing and Production 205
5. Maintenance, Service and Repair 209
6. Communications - Graphic 213
7. Communications - Electronic 217
8. Electronics and Instrumentation 221
9. Energy and Power 225

E. Personal and Public Services Occupations Units

1. Hospitality and Recreation 231
2. Clothing Management, Production and Services 237
3. Institutional and Home Management 241
4. Home Furnishing, Equipment and Services 245
5. Human Development Services 249
6. Protection Services 255
7. Transportation Services 259
8. Government Services 265
9. Personal Services 269

III. Bibliography 273

Preface 275
1. Comprehensive Reference Sources 276
2. Applied Biological and Agricultural Occupational Cluster ... 279
3. Business, Marketing and Management Occupational Cluster. 296
4. Health Occupational Cluster 313
5. Industrial Oriented Occupational Cluster 330
6. Personal and Public Services Occupational Cluster 353
7. Career Guidance 388
8. Different Skills for Different Tasks 393
9. Professional Resources 396
10. Publishers 399

OVERVIEW OF PROJECT

In July 1976, Eastern Illinois University was awarded a contract from the Professional and Curriculum Development Unit, Department of Adult, Vocational and Technical Education, Illinois Office of Education. This contract was for the development of Career Exploration/Occupational Information Planning Curriculum Guides for Use at the Junior High/Middle School Level.

The major objectives of this project were to:

1. Develop a planning guide designed to:
    a. Provide background information for the junior high/middle school staff on the philosophy of career exploration and its relationship to the growth and developmental stages of students in grades 6-9.
    b. Provide information for planning and implementing career exploration activities.
2. Develop a curriculum guide for each of the five clusters identified by the Illinois Department of Adult, Vocational and Technical Education.
    a. Applied Biological and Agricultural Occupations
    b. Business, Marketing and Management Occupations
    c. Health Occupations
    d. Industrial Oriented Occupations
    e. Personal and Public Service Occupations
3. Evaluate the curriculum guides by field testing.

The curriculum guides were prepared to provide occupational exploration activities which promote the growth of career development concepts within the student. The activities fuse subject matter knowledge and skills, occupational tasks and knowledge, and career development concepts in such a way that greater educational relevance can be given to life in the work world.

Ms. Peggy Pool, the DAVTE contract administrator and Ronald A. Miller, Mary Lou Shea, Allan L. Utech, Gerry Gaedtka, Virginia Dorn, and Joan Gardner, DAVTE occupational consultants, worked closely with the project staff. They aided in the organization of the materials, selection of content and the identification of occupations clustered into each unit. Their concern for non-sex stereotyping, realistic exploration activities, accuracy of content and infusion of career development concepts were invaluable.

Vocational teachers: Dr. Robert Walker, Agriculture, University of Illinois; Dr. Thomas Elliott, Business, Eastern Illinois University; Mr. Larry Fulton, Industrial Arts, Thomas Jefferson Junior High School, Decatur; Ms. Shirley Barrow, Personal and Public Services, Franklin Middle School, Springfield, and Ms. Darlene Franscavitch, Health, Mt. Vernon Area Vocational Center, Mt. Vernon; reviewed the materials during development and provided a potential user's opinion.

Mrs. Mary Bare, South View Junior High School, Danville, Illinois; Dr. Jerry Cantlon, Illinois State University, Normal, Illinois; James Morgan, Arcola Junior High School, Arcola, Illinois; Lyle Reedy, Carl Sandburg

Middle School, Freeport, Illinois; Clifford H. Sweat, Park Ridge, Illinois; all members of the Junior High School Association of Illinois executive board, provided input for organization and content of the curriculum guides.

Carol Sanders, Diane Blair, and Joyce Felstehausen, Career Education Specialists; Dr. Richard W. Lawson, Library Science; Dr. Walter McDonald, Geography; Dr. Thomas Floyd, Junior High School Education: and other members of the Eastern Illinois University Faculty provided instant and important in-house consultant services.

Dorothea M. McDonald, project assistant, brought her guidance background, subject matter expertise, and real concern for students to the project. Jackie James and Linda Blum, project typists,provided invaluable services.

Dr. Charles Joley, Director of Occupational Teacher Education, Eastern Illinois University, served as on-site monitor. He provided encouragement and administrative aid throughout the project.

The staff and consultants of this Career Education Curriculum Project hope that their efforts will help teachers provide students with the exploration activities they need in order to make wise and satisfying career decisions.

Dorothy M. Lawson

Dorothy M. Lawson
Project Director

FIELD TESTING

Two schools were selected to pilot test the materials; Marshall, Ill., Junior High School and Arthur, Ill., Junior High School.

The sites were selected because they met the major criteria for field testing the materials: Both schools are in the beginning stage of developing a career exploration program, individual instruction and team teaching was evident, one school had a vocational program and one school did not have a vocational program. Both schools were within a 150 mile radius of Eastern Illinois University.

The materials were field tested by subject matter teachers in each of the participating schools. The guidance counselor and principal worked with the teachers providing resources when requested.

Each staff had the materials for six weeks, reviewed the planning guide, taught units in each cluster, and provided samples of materials developed by staff and students, and slides depicting the career exploration activities.

The following teachers participated in the field testing:

Arthur School District, Arthur, Ill.
    Principal: Mr. Hewitt Hafer
    Social Studies Instructor: Mr. Jack L. Corum
    Mathematics Instructor: Mr. Owen Davis
    Science Instructor: Mr. W.E. Jensen
    Reading Instructor: Ms. Delores Thomas
    English Instructor: Ms. Arlene Woods.

Marshall School District, Marshall, Ill.
    Principal: Ms. Doris Shawler
    Social Studies Instructor: Mr. Tom Jones
    Learning Disabilities Instructor: Ms. Kathryn Hampsmire

By understanding that students can and do learn in ways other than from books, in settings other than the formal classroom, and from persons other than certificated professional teachers, and by capitalizing on opportunities, a basis can be developed upon which students will be able to make wiser career decisions. By developing a program which utilizes the community and its many resources, education can be made more relevant and students may become more active participants in their education.

If students are to even begin making meaningful vocational investigations they must first become more aware of the almost infinite possibilities that are open to them. The essential rationale underlying this career education curriculum pattern is that *to the degree students become aware of the world of work, understand the requirements for success in various occupations and realize their own capabilities and possibilities, they will be able to make rational choices which are most appropriate for them.*

These materials were developed as an aid for helping the instructional and administrative staff develop a program which will help students acquire the necessary tools for assessing their internal and external environment. This includes: A conceptual framework for analyzing and synthesizing occupational information with knowledge of self; development of skills in order to establish goals, career plans and career alternatives; exploratory opportunities which are occupational and career supportive in nature; community experiences which provide role models for future identification purposes; and assistance for individual students as they design career blueprints for reaching both short term objectives and long range career goals.

Assumptions

The authors of this guide have made a number of assumptions:

1. Educators are workers who know something about the "world of work."
2. Students are woefully inexperienced in the application of learning to work situations.
3. Students need more occupational exposure through structured experiences in order to make satisfying and wise career decisions.
4. Junior High/Middle school students do begin to formulate their career decisions at this age.
5. Instructional staff members, because they know their subject areas well and are innovative, creative and resourceful, are capable of developing localized materials from curriculum guides.
6. The career exploration level builds on the career awareness level.

The Goals and Objectives

These materials were developed to attain three major goals:

1. Provide a planning tool for developing an exploration level career education program, grades 6-9.
2. Provide curriculum guides which would present teaching strategies for identifying, experiencing and evaluating knowledge of interest in and apparent abilities required for success in five selected occupational clusters as identified by the Division of Adult, Vocational and Technical Education, Illinois Office of Education.
3. Provide a bibliography of resources appropriate for development of a career exploration curriculum.

Uses

These materials are designed to be used in planning a comprehensive career education program and for developing individual career education units. They contain strategies for: Organizing, planning, and implementing a program; developing staff inservice; conducting a needs assessment; identifying resources; and preparing a resource center. There are also suggestions for involving the community, parents, and students in the planning and implementation process, and tips for conducting field trips and interviews.

A successful career education program needs to be articulated K-12, across all disciplines. These materials may be used by a district in planning an articulated program since they provide a basic framework of career education concepts, occupations, and subject matter and activities, for grades 6-9. The introduction to career education, a rationale for career education in the junior high/middle school, roles of parents, teachers, the community, and others in the development of a career education program, and some samples of assessments are relevant for planning at any grade level.

Limitations

The planning guide provides ideas and suggestions for the development of a career exploration program at grades 6-9 level. Because the guide offers alternatives, the local school will have to make its own decisions as to which organizational plan best suits its district.

Each unit provides: a preface containing background information; subject matter relationships; career development concepts; and occupational titles. The units also include basic instructional goals and activities designed to help students meet those goals. It is assumed that teachers will adapt the materials to fit their students' needs and will add ideas of their own. Local resources are not identified, but left for the instructor to locate and use. Occupational briefs are not included as that information should be available in school libraries or the guidance office. The activities are not designed to develop skill competencies but rather to provide opportunities to experience activities related to various occupations, to gather information relevant to the occupations, and to refine the career development concepts introduced in a particular occupational unit of study. *The units are not lesson plans but they do contain the elements necessary to develop lesson plans appropriate to individual classes.*

A

PURPOSE

Rationale

The purpose of this career education planning and curriculum guide for the junior high/middle school is to provide a tool for articulating the student's career development. That is, to build on the career awareness experiences in the K-5 level and broaden those perceptions by exploration experiences which will provide a firmer base upon which to make career decisions.

Theorists have identified career patterns at this level as a time when vocational thought is based on the individual's likes, dislikes, and known abilities. Through various types of general activities and exploratory behavior, the individual both differentiates self from others and sees certain similarities between self and others. As the individual matures, there is a tendency to internalize some of society's expectations, e.g., developmental tasks, and to begin to develop goals for oneself. Some theorists see the series of jobs a person holds as representing a lifelong search for a means of expressing oneself in the world of work, that people work to provide a livelihood to maintain satisfactory human relations and to enjoy the satisfaction from working. For some, work becomes a way of life, a means of satisfying needs, and a vehicle for achieving selfhood.[1]

The major goal of career education is to provide students with tools for getting answers when they ask "Where am I going, and how can I get there?" Because there is a general consensus as to how children develop, and recognition that career development can be enhanced by an educational process, programs can be developed which will aid students to make the best use of their potential in a satisfying manner.

Part of American education's current commitment to open education is more community involvement and reduction of racial and sex stereotyping. These two factors are very important in the development of a career education program. Greater understanding of the abilities and desires of people can be attained when students and potential employers have opportunities to meet with each other and exchange ideas. Career education programs can be a means of developing communication between educational institutions and the community.

Teachers should be interested in and express interest in the career aspirations of their students. They should be concerned about and involved in helping students answer the question "Why should I work?" Teachers should be aware that there are many learning opportunities which exist in the broader community, outside the classroom where there are persons who have learned much through practical experience, knowledge which will be of value to students.

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[1] Zaccaria, Joseph, Theories of Occupational Choice and Vocational Development, Houghton Mifflin Co. Boston, Mass. 1970

I.

PLANNING GUIDE

B

INTRODUCTION TO CAREER EDUCATION

Background

The term "Career Education" was coined while Dr. Sidney Marland was Commissioner of Education in 1971. At that time educators were looking for the means to provide students with relevance between the classroom and the working world and a means of helping students establish goals toward which they would work.

Historically the two basic purposes of education have been: (1) Preparation for living and (2) preparation for making a living. The first purpose has greatly overshadowed the second in that education has seemed to be preparing students for higher levels of education.[1]

The goals of public school education in the 19th century emphasized training of the mind, because it was assumed that once trained, it would respond appropriately to every type of problem. Most vocational skills, attitudes and knowledge were taught in the home and on the job, though private schools and colleges provided vocational skills for a few occupations.[2]

In the early 20th century it became clear that changes were needed. Job content was changing rapidly and required a substantial investment in training. From 1917 to the mid 1930's there was one principle of vocational education: Meet the labor need of local communities.[3]

The War Production Training programs of the early 1940's convinced some vocational educators that a far higher proportion of the population could be prepared for useful work than they had ever felt possible and that the goals of vocational education should be expanded to include the development of skills of all students.[4]

This led vocational education to increase its objectives to three: (1) meet the labor and economic needs of the nation, (2) increase the options available to the individual student and (3) increase the intelligibility of both general and occupational education.

The third objective came about as vocational educators noticed that many of their students increased rapidly in reading and computational skills after making a tentative career choice and learning something of the requirements of that career. Gains in comprehension of other school content often occurred as well. A typical student statement was "For the first time some of this school stuff makes sense." Usually this change in student awareness was not the result of planning on the part of the school. Educators determined that if relevance occurred frequently by accident, wouldn't it occur much more frequently if the teacher encouraged it through planned activity? It is from that experience that career education resolved to go one step further and ask all teachers to plan instruction so that its career implications became obvious.[5]

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[1] Hoyt, Kenneth, B., Evans, Rupert N., Mackin, Edward F., Mangum, Garth L., Career Education: What is it and How to do It, Olympus Publishing 1972. p. 30.

[2] Ibid., p. 51.

[3] Ibid., p. 52.

[4] Ibid., p. 52-53.

The Vocational Acts of 1963 and 1968 changed the charge to vocational educators from an emphasis on developing the skills needed to fit the labor market to a greater concern for the employability of people. In order to do this, a broader base was required which would include all classroom teachers, supportive staff and the community.[6]

Into this atmosphere the movement we now know as "career education" was born. This new concept is dependent on the career development process and on the teaching/learning process as a means of organizing its implementation efforts. An equally strong emphasis is placed on the need for expanding both the variety and nature of educational opportunities available for students.

The collaborative involvement of the entire formal educational system, the business-labor-industry-professional-government-community and the home and family structure in the process of helping students become whom they want to be, is an exciting and gratifying goal of education.

Student Needs

Students in the Junior High/Middle School are in a transitional stage from child to young adult. They are looking for models for behavior, lifestyle, careers and personhood. They are concerned about whom they are "becoming." Some are very definite about likes and dislikes, some are unsure, all need guidance as they think about, "Who am I?" "What do I want to do?" and "How can I become whom I think I want to be." This is a time full of questions about relevance of school, need for independence, and drives to become adults. Therefore, this is a very important time in the career development of students. It is a time to provide opportunities to explore in depth the working world they will soon enter and to provide opportunities for students to analyze themselves and set goals for the future.

If career education can help students recognize the close relationships between education and work that exist now and will exist in the future, and work as a meaningful part of the total lifestyle of the individual, then education has helped them attain both of education's goals, preparation for making a good living and preparation for living.

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[5] Ibid., p. 53.
[6] Ibid., p. 54.

Special Population Groups

Career education has a special meaning to all students and adults who will take their place in the working world, but to some groups this program will have a greater effect. Many groups of people have been neglected by educators, parents, and the community as a whole, e.g., those who will make very little contribution to the work world and therefore do not need assistance in making career decisions. Those most often helped are those who have already made professional career decisions and need help in identifying where to get the additional education required to enter their selected profession. Most females have not been considered as permanent members of the work force. Minorities and the handicapped have been relegated to unskilled or semi-skilled jobs. Those who had relatives in the work unions were assured membership whether or not they liked or were suited to that particular occupation. These materials are designed to help *all* students.

The materials which have been developed for this project try to help teachers eliminate bias and encourage all students to explore occupations on the basis of interests, abilities and willingness to meet training requirements.

Relationship to Career Guidance and Subject Area Disciplines

The career guidance counselor is:

1. Concerned with helping all persons, of all ages, in all settings recognize and capitalize on relationships between education and work, both paid and unpaid, that exists in our society.
2. Aware of career development as part of human growth and development and of work values as part of one's total system of personal values.
3. Trained to provide services which help individuals to synthesize information about both the individual and options available to the individual.
4. Prepared to coordinate guidance activities with other teachers.

The career guidance counselor can help the career exploration program by serving as a coordinator to bring students, teachers, and workers together; as a resource of occupational information and materials; and by actively seeking to help teachers discover and infuse career implications of their subject matter into the teaching-learning process.

The classroom teacher, as the person who has the greatest student contact:

1. Works with students individually and in group situations.
2. Has the opportunity to infuse career development concepts and occupational information into the existing curriculum.
3. Has the responsibility to provide students with a relevance of their course work to present and future needs.

According to Kenneth Hoyt, an "instructor" is one who imparts subject matter to students. On the other hand a "teacher" is one who, in addition to a concern for imparting subject matter, is also concerned with helping students understand reasons why it is important to study the subject matter. One of the reasons students go to school is so they can engage in work after leaving the formal educational system. For almost all subjects, career implications exist pertaining to the world of paid employment. In others, the majority of career implications pertain to the work that individuals may choose to do in the productive use of leisure time. It is important and appropriate that both kinds of career implications be made clear to students.[1]

Many of the objectives of career education have been stressed by some teachers, but for others they are new:

1. Increase the relationships between education and work and the ability of individuals to understand and capitalize on these relationships.
2. Increase the personal meaning and meaningfulness of work in the total lifestyle of each individual.
3. Provide students with general career skills required for adaptability in our rapidly changing society and with specific career skills that can be utilized in making the transition from school to the world of paid employment.
4. Decrease alienation among students and teachers in order to increase academic achievement, and prepare students for a better work life.[2]

The classroom teacher and the career guidance counselor are key people in the development of a career exploration program. The counselor has many services to provide to both teachers and students. The teachers, with their teaching expertise, can infuse their programs with career development activities.

Occupational Information

In order to arrive at a conclusive career decision, one must have a store of relevant information, including basic information common to most jobs and expectations required of workers in specific occupations. Of equal value is the knowledge of sources of information, whether it be printed materials, workers, guidance counselors, or employment agencies.

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[1] Kenneth B. Hoyt, Career Education and The Teaching/Learning Process, Paper delivered at American Society for Curriculum Development Convention, New Orleans, La. 1975 p. 6.

[2] Kenneth B. Hoyt, Who Is A Good Teacher, Today? Paper delivered at special Lecturian Education Conference, Kansas State College, Pittsburgh, Kansas 1975 p. 7.

The occupational information included in this guide is provided to give the teacher very basic information. Additional in-depth resources are given for student research for specific occupations. Access to up-to-date occupational information is important. Establishing a resource center which includes books, films, tapes, brochures, monographs and a file of local resources will be invaluable for student research and classroom activities.

Process of Making Occupational Choices

Hoppock says that occupations are chosen to meet needs. Information about ourselves affects occupational choice by helping us to recognize what we want and by helping us to anticipate whether or not we will be successful in collecting what the contemplated occupation offers to us.[1]

Ginsberg states that occupational choice is a long-term process which becomes increasingly irreversible and that the eventual choice represents compromise between what the individual would ideally prefer and the available realistic possibilities. This process occurs during a series of rather definitive stages or periods.[2]

Because the Junior High/Middle school student is in the process of making vocational choices it is important that the educational system meet individual needs. A comprehensive career education program should provide the opportunity to experience the decision-making process. Students who have developed the process and have assimilated pertinent knowledge will have a base for making career decisions throughout their career.

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[1] Zaccaria, Joseph, Theories of Occupational Choices and Vocational Development, Houghton Mifflin Co., Boston, Mass. 1970.p.35.

[2] Ibid p. 40.

C

GROWTH AND DEVELOPMENT OF THE 11-14 YEAR-OLD STUDENT RELATED TO CAREER EXPLORATION EXPERIENCES

What kinds of persons are these junior high/middle school students? Perhaps the one characteristic trait they have in common is "changeability." It is difficult to describe the "typical" junior high/middle school student. Just as there are many differences within any one individual, there are also many differences between individuals. The transition from child to adult involves changes in many ways, and rarely are the changes consistent across the spectrum of characteristics. One student may be twelve years old chronologically, but may be fourteen in mental development, ten in physical development, eleven in social development, and thirteen in emotional development.

The age range of junior high/middle school students may be from nine or ten years of age for the advanced students to sixteen or seventeen for one who has repeated some grades. Aptitudes, interests and mental ability are far from being fixed characteristics. Physical development may range from a physically immature, small child to one who has reached physical maturity and towers over the other students. Social development may range from the extremely shy, introverted person to the gregarious extrovert. Emotional development has a full range of expression both within individuals and among individuals. Attitudes, beliefs and values of junior high/middle school students are also in the process of change.

Students need to be aware of their level of growth in relation to overall growth and understand how they can cope with themselves at that level. Opportunities are provided in a career development program to see one's self as an integral part of the society, both as a member of a group and as an individual. Looking at oneself and accepting self and others for what they are and for their potential should encourage the development of a healthier society.

Junior high/middle school age is crucial insofar as developing self-concept is concerned. There is much questioning about self and about significant others and society as a whole. "What kind of person am I? Where do I fit in society? What do my peers and adults think about me?" Early adolescents often have an unrealistic view of themselves. Ask them their weaknesses and they will give a long list of them, but ask their strengths, and they are very likely to shrug their shoulders and say, "I don't know." Exploration activities focused on self and on occupations may help students make realistic assessments of themselves. It is important to place emphasis on strengths. Any attention given to limitations should be in terms of what can be done to overcome them or to learn to live with them. Judgement of "good" or "bad" should be avoided.

In view of the changeability of youth at this age, it is obvious that career studies should be exploratory. Only a very few students are ready to make a career choice and follow it through to preparation and maintenance. Therefore an effective junior high/middle school career exploration program will begin where the students are and progress from that point.

Understanding the needs of junior high/middle school students, both as a group, and as individuals, is basic to understanding each individual. The National Association of Secondary School Principals recognized the need to put more emphasis on vocational education as evidenced by "The Imperative Needs of Youth" which were developed in the early 1950's.

1. All youth need to develop saleable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations.
2. All youth need to develop and maintain good health and physical fitness.
3. All youth need to understand the rights and duties of the citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.
4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.
5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.
6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man. (sic)
7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.
8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfactions to the individual with those that are socially useful.
9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work cooperatively with others.
10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.

Basic needs have been identified as: (1) Physiological--water, food, rest balanced with exercise, and a fairly constant body temperature. Sex is sometimes included. (2) Psychological--security, achievement, independence, and self-respect. The need to learn, to satisfy curiosity may also be included. (3) Social--affection and companionship, approval, recognition, prestige, power and understanding.

In addition to these needs, or perhaps, or order to meet these needs, young adolescents need the basic academic skills. They also need "coping" skills, the ability to cope with people and things in their environment, to cope with the vast amount of change in technology and its effects on the culture. There is a need to learn the process of decision making which includes planning for one's future. Specific needs as related to career exploration includes self-knowledge, unprejudiced knowledge of the work world, knowledge of steps to take toward career choice and preparation, and outside work experience.

D

ROLE OF "SIGNIFICANT OTHERS" IN CAREER DEVELOPMENT

"Significant others" involved in the career development of junior high school/middle school students are those with whom the students have a close, continuing relationship--parents, teachers, counselors, and peers. The role of these significant others may be either helpful or detrimental. Some of the ways in which these persons may be helpful in the development of a career exploration program are:

Parents

1. Serve as volunteer aides on field trips.
2. Acquaint their children with their own occupations, taking them to work with them, if possible.
3. Provide hands-on occupational tools and other materials for use in the classroom
4. Visit the classroom to explain one's own occupation and/or compare and contrast that occupation with the occupations of other persons.
5. Teach the values and habits of gainful employment to children at home.
6. Support the career exploration program by serving on a advisory council.
7. Help find community resources for field trips or other experiences and activities.
8. Take workshops, classes, or engage in other activities to up-grade one's occupational skills. Help children to see and understand the purpose of these activities.

Counselors

1. Work with other school staff to provide career information materials and assistance with locating other materials not available in the school library or the guidance office.
2. Work with the librarian to establish a career resource center for students and teachers.
3. Work with the curriculum council or other group in planning a career exploration program.
4. Teach students decision-making skills.
5. Help students understand the purpose of personnel file (cumulative record) and interpret test and inventory scores.
6. Coordinate activities of teachers and community personnel, i.e., parents and members of the businesses, professions, industries, and labor groups.
7. Arrange for representatives of post-high school training schools and colleges to meet with students, parents and teachers.
8. Visit classes to explain the role of the counselor in aiding in career exploration.
9. Meet with students in small groups to improve study habits, and understand the relevance of school subjects to successful employment in an occupation.
10. Help students, teachers and parents with knowledge of work values, current trends in the employment market.
11. Conduct follow-up studies of former students related to the career education programs offered in the schools.

Teachers

1. Involve parents, students and persons from businesses, professions, industries and labor groups in planning and implementing a career exploration program in:
   a. Public relations
   b. Locating community resources
   c. Planning for and assisting with field trips
   d. Visiting the classroom to share information about individual occupations--preparation and training, rewards and frustrations, activities on the job, personal characteristics needed for success, responsibilities and benefits, and lifestyle.
2. Participate in career exploration in-service workshops.
3. Find employment outside of school during summer months.
4. Become familiar with resources both within and outside the school.
5. Become familiar with the steps to be taken to prepare for, to search for, and to enter a new occupation by assuming that the present teaching position has been eliminated and a new occupation must be found.
6. Devise learning packages for career exploration activities.
7. Develop a personal philosophy of career exploration following study of career exploration theories of such persons as Super, Hoyt, Mangum, Evans, Shertzer, Bailey and Stadt.
8. Develop and conduct career exploration activities.

Administrators and School Board

1. Lend support to the career exploration program by providing leadership, financial support, materials, and adequate time for staff to plan and implement the program.
2. Place emphasis on the priority of the career education program throughout the schools in the district.
3. Assist in public relations to involve other areas of the community in supporting the career education program.
4. Take leadership if it is necessary to revise the curriculum to integrate the career exploration program with the academic offerings.

Students

1. Assist in planning the development of the career exploration program.
2. Assist in planning the development of the individual clusters and of the units within the clusters.
3. Visit places of employment of a given unit.
4. Talk with parents about their occupational decision making, training, and experiences.
5. Encourage parents to cooperate with the faculty in the career exploration program.
6. Take leadership roles in getting other students interested and involved.
7. Share occupational information and experiences with other students.
8. Interview workers.
9. Identify specific needs which may be met through a Career Exploration Program.
10. Participate in observations and experiences in work settings.

Community--Business, Industry, Labor, Professions

1. Provide field trips for large and/or small groups of students.
2. Provide short-term and long-term observation and/or work experience for students.
3. Serve as a consultant for school faculty and students in setting up the career exploration program.
4. Assist in promoting the career exploration concept through in-house newsletters and community media.
5. Provide materials and equipment to schools for hands-on experiences.
6. Reinforce the use of career development concepts.

E

IMPLEMENTING A CAREER EXPLORATION PROGRAM IN THE JUNIOR HIGH/MIDDLE SCHOOL

Organizing

Planning a career exploration program requires the establishment of a committee of teachers, administrators, community members and students who can provide specialized input. This committee should develop a rationale and broad objectives for the program. The program should be outlined according to the broad objectives by stating specific objectives to meet student needs. The student needs can be assessed through survey instruments and follow-up studies. The committee should also review curriculum materials already developed to find the model that will meet the needs of the local district. By using a curriculum survey in each subject matter area, the topics can be identified which are best suited for inclusion of career exploration activities. The establishment of a Career Education Resource Center will put all resources at the disposal of the staff and students and will provide a central clearing house for the use of community resources. Each individual teaching unit should identify student objectives, and activities which will meet those objectives. In order to make program improvements, all facets of the program should be evaluated. Revisions should be made which will utilize the resources and meet the continuing needs of the students.

ESTABLISH BASIS FOR EXPLORATION PROGRAM

Basis for local development presented in the Planning Guide.

Establish Planning Committee (Include Community)
Develop Rationale
State Broad Objectives

OUTLINE LOCAL EXPLORATION PROGRAM

To be developed by local staff.

Identify Student Populations & Needs
State Specific Objectives to Meet Needs
Identify Career Education Curriculum to be Adopted
Identify Course Units Where Career Exploration Can Be Infuse
Establish Career Education Resource Center

PREPARE TEACHING PLANS

To be further developed, as individual lessons are not a part of the guides.

Identify Student Objectives
Organize Course Structure and Content
Develop Lesson Plans

EVALUATE PROGRAM

To be done by local staff.

Make Revisions

Program Articulation

Planning any program requires a knowledge of students' past experiences as well as their future needs. Career development follows the students' pattern of physical, social, emotional and intellectual growth. For that reason, programs developed for children in the elementary grades are designed to provide a career awareness. This program helps children become aware of what people do and of how their careers affect themselves and society. No emphasis is made on students making a career *choice*. Rather, it is a time to become aware of people at work, what they do, how they make career decisions, and how they cope with the results of those decisions.

Students in the junior high/middle school are ready to do some career explorations based on their level of career awareness. Those fortunate students who have had a planned career awareness program will be ready to progress farther and faster than the student who has just been introduced to the career education program. Students at this age are ready to identify their career interests based on knowledge of self and the occupational information garnered through planned experiences. This stage requires students to do some researching, comparing, setting of goals and looking at oneself in a realistic manner.

The career orientation stage gives opportunities for further in-depth clarification of career goals. Courses in each of the five cluster areas are designed to give comprehensive orientation to the occupations within each area. Some students choose to enter a non-professional career at this time, some choose to pursue training for a technical career, and others choose to pursue preparation for entry into further academic training for a professional career.

For some students, entry into the non-professional or technical careers and apprenticeable trades will be possible after post-secondary training in a community college and/or technical school. For other students, preparation for professional careers will require university preparation and some type of internship.

All adults will probably find it necessary to continue their education if they wish to enter a new career or advance within their present career. It should be noted that, as new careers emerge and others recede, it is always important to become aware of new opportunities, to identify the potential one has for success in the new career, to evaluate any skills which may be transferred, and to identify deficiencies to be removed. The career education program designed for the K-12 student is a system by which one learns what data is necessary, and how and where to gather the data and skills needed to make a wise and satisfying career decision, whether it be age, sixteen, twenty or forty-five.

An articulated career education program is pictured in figure 1. The bottom of the triangle represents a broad base of career awareness, a point in time when one looks at careers in a general way. The system provide movement though exploration opportunities for the gathering of information and life experiences, to the top of the triangle where one continues one's

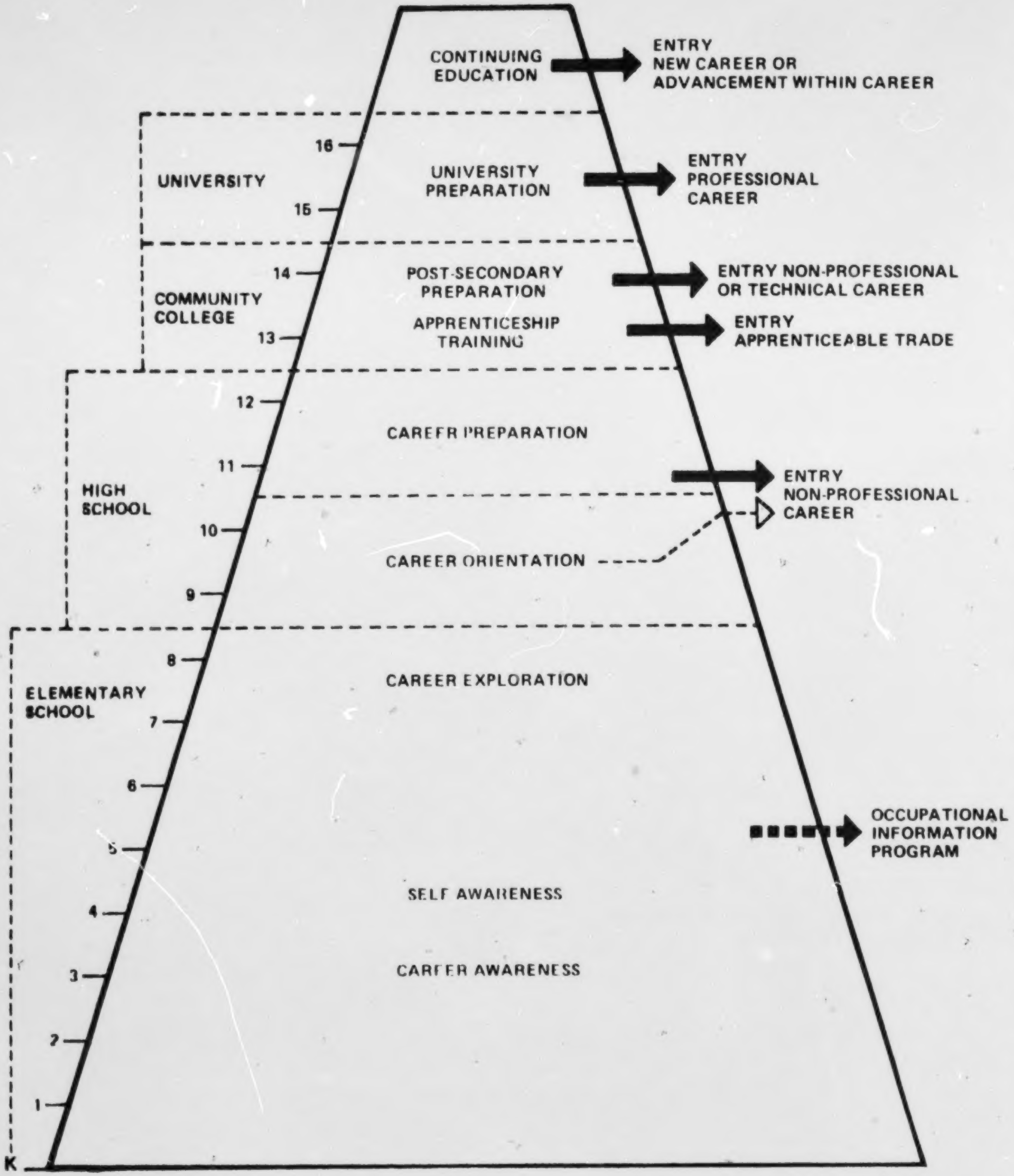

CONTINUING EDUCATION
ENTRY NEW CAREER OR ADVANCEMENT WITHIN CAREER
UNIVERSITY
16
15
UNIVERSITY PREPARATION
ENTRY PROFESSIONAL CAREER
COMMUNITY COLLEGE
14
13
POST-SECONDARY PREPARATION
ENTRY NON-PROFESSIONAL OR TECHNICAL CAREER
APPRENTICESHIP TRAINING
ENTRY APPRENTICEABLE TRADE
HIGH SCHOOL
12
11
10
9
CAREER PREPARATION
ENTRY NON-PROFESSIONAL CAREER
CAREER ORIENTATION
ELEMENTARY SCHOOL
8
7
6
5
4
3
2
1
K
CAREER EXPLORATION
OCCUPATIONAL INFORMATION PROGRAM
SELF AWARENESS
CAREER AWARENESS

Figure 1

A SEQUENTIAL CAREER EDUCATION MODEL

STUDENT DEVELOPS SELF-AWARENESS AND UNDERSTANDING OF HIS INTERESTS AND ABILITIES

STUDENT DEVELOPS ATTITUDES ABOUT THE PERSONAL, SOCIAL AND ECONOMIC SIGNIFICANCE OF WORK

ELEMENTARY	JUNIOR HIGH/ MIDDLE SCHOOL	GRADES 9 - 10	GRADES 11 - 12	POST HIGH SCHOOL
OCCUPATIONAL AWARENESS:	OCCUPATIONAL EXPLORATION:	OCCUPATIONAL ORIENTATION IN DEPTH, BEGINNING SPECIALIZATION:	OCCUPATIONAL PREPARATION STUDENT SPECIALIZES IN ONE AREA	EMPLOYMENT IN AREA FOR WHICH TRAINED
Student is introduced to occupations through a series of planned experiences representing the entire world of work	Student explores several clusters through actual "hands on" or "at the job" experiences. Student becomes aware of abilities, interests and aptitudes of self. Student is provided opportunities to relate knowledge of self to career choice.	Student may select one cluster to explore in greater depth. Student will begin to develp entry level skills. Student may change clusters while making career choice.	Student specialized in one occupational area. Student takes prerequisites for further education and/or intensive skill training for job entry.	FURTHER EDUCATION IN ADULT EDUCATION PROGRAM FURTHER EDUCATION IN OCCUPATIONAL EDUCATION. GRADES 13 AND 14. FOUR YEAR UNIVERSITY CAREER PREPARATION.

Figure 2

education for entry into a new career or advancement within a career. An adult at that stage could circle back to the awareness and exploration levels to gather data on which to base a new career decision. Fig. 2, suggests the type of activities for each level.

Localizing a Curriculum Design

Because schools are set up to operate in different modes, the developers of this curriculum design chose to develop the materials to provide the following three options.

1. The five clusters may be taught as one unit of study by one instructor. This option is designed for a school which plans to have a separate career education class.
2. The five clusters may be taught as five units of study in any course where the decision has been made to provide continuity to the cluster study by studying a selected cluster in one class.
3. The five clusters may be broken into 45 separate units to be taught in the subject matter classes most closely related to the occupations being studied. This option is for those who wish to distribute the units to individual teachers. The matrix in figure 3, page 20, identifies the subject area in which an occupational unit would fit. It would be appropriate for the teachers to review the unit to determine where and when they wish to infuse the unit into the existing curriculum.

Of utmost importance in localizing this curriculum design is the understanding of local needs and the availability of local resources. *Any program is only as good as the planning and implementation procedures utilized by the local school district.*

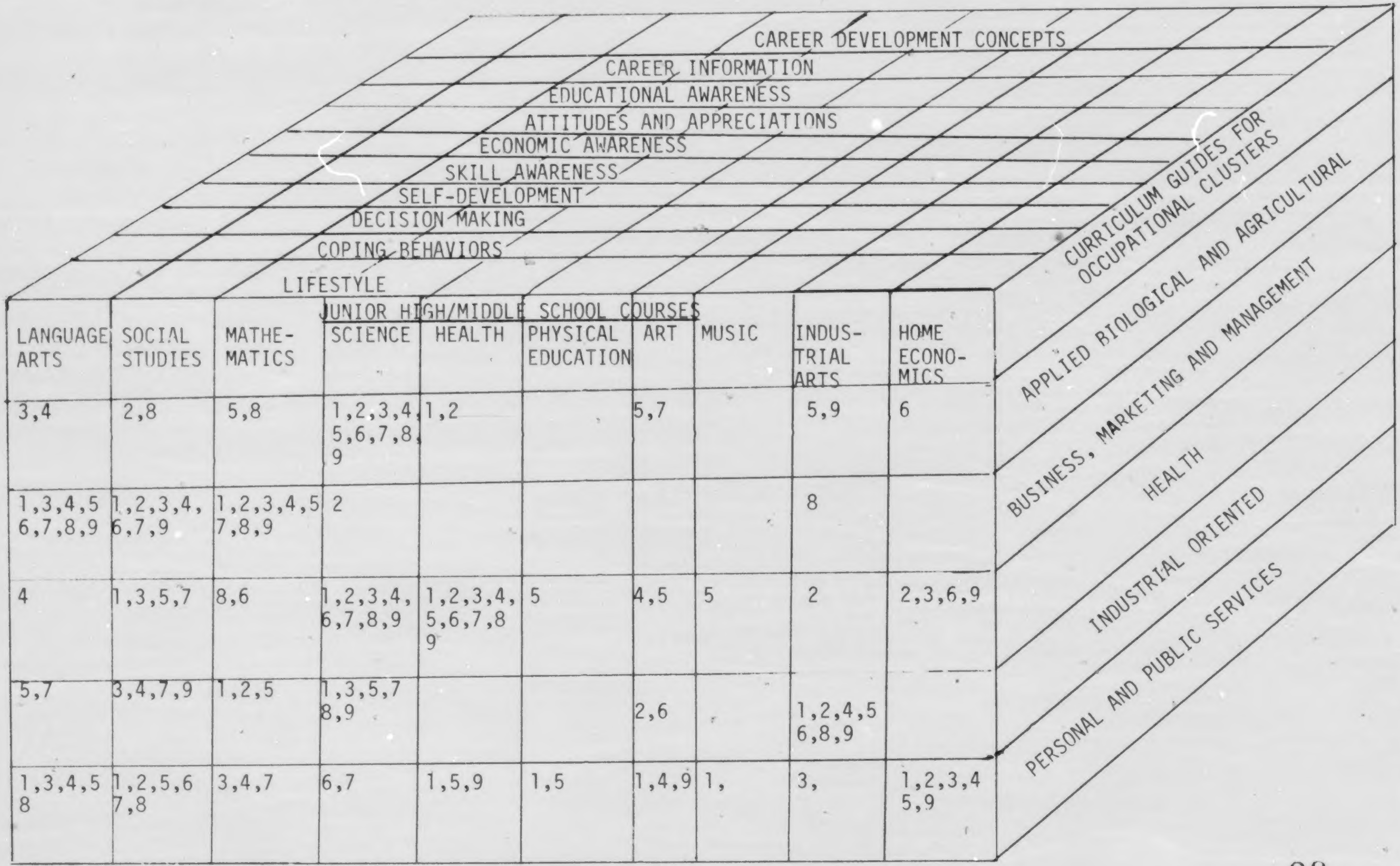
Needs Assessment

How does an individual teacher, a curriculum committee, or a school district determine what changes should be made in the curriculum? What data is needed to support the suggested changes? Sometimes it has only been by observation, sometimes by test results, and sometimes the community has indicated that certain needs were not being met. As stated in the "Introduction to Career Education", vocational educators and the community saw indications that the selection of career goals motivated students to higher levels of performance, and students wanted and needed aid in selecting their career course.

It was also found that when students, the staff and community were involved in developing a program, it tended to be more successful. Why? Because of the type and amount of input based on the needs of each group. The success of a career education program will depend in part on the input from the students, the staff and the community.

Students: Since this program is for students, they should be involved in determining the local curriculum. Their concerns, attitudes and opinions regarding employment, study and the future should be sought. They should

A MODEL FOR THE INFUSION OF CAREER EXPLORATION ACTIVITIES INTO THE EXISITING CURRICULUM


CAREER DEVELOPMENT CONCEPTS
CAREER INFORMATION
EDUCATIONAL AWARENESS
ATTITUDES AND APPRECIATIONS
ECONOMIC AWARENESS
SKILL AWARENESS
SELF-DEVELOPMENT
DECISION MAKING
COPING BEHAVIORS
LIFESTYLE
JUNIOR HIGH/MIDDLE SCHOOL COURSES

CURRICULUM GUIDES FOR OCCUPATIONAL CLUSTERS	LANGUAGE ARTS	SOCIAL STUDIES	MATHEMATICS	SCIENCE	HEALTH	PHYSICAL EDUCATION	ART	MUSIC	INDUSTRIAL ARTS	HOME ECONOMICS
APPLIED BIOLOGICAL AND AGRICULTURAL	3,4	2,8	5,8	1,2,3,4,5,6,7,8,9	1,2		5,7		5,9	6
BUSINESS, MARKETING AND MANAGEMENT	1,3,4,5,6,7,8,9	1,2,3,4,6,7,9	1,2,3,4,5,7,8,9	2					8	
HEALTH	4	1,3,5,7	8,6	1,2,3,4,6,7,8,9	1,2,3,4,5,6,7,8,9	5	4,5	5	2	2,3,6,9
INDUSTRIAL ORIENTED	5,7	3,4,7,9	1,2,5	1,3,5,7,8,9			2,6		1,2,4,5,6,8,9	
PERSONAL AND PUBLIC SERVICES	1,3,4,5,8	1,2,5,6,7,8	3,4,7	6,7	1,5,9	1,5	1,4,9	1,	3,	1,2,3,4,5,9

UNITS IN EACH CURRICULUM GUIDE

be involved in the total process so that the curriculum will be relevant to their needs.

Staff: Both administrative and instructional staff members must be involved in implementing curricular changes. It is of prime importance that the staff understand that the career exploration program emphasizes the two basic purposes of education: (1) Preparation for living and (2) preparation for making a living. Identifying staff competencies and deficiencies and ways to improve skills and eliminate deficiencies will be a necessary part of planning. A well developed program, when infused into the established curriculum, can provide a relevance and a much needed motivational force that encourages students to make the most of their educational experiences.

Community: Because a career exploration program utilizes the community to a greater extent than ever before, the community needs to be involved in planning, implementing and evaluating the local program. The community should have high interest in the program because students will be future workers, and pleasant contacts may result in better employee-employer relationships, as well as better prepared employees.

A number of needs assessment instruments have been developed. Models can be found in the ERIC system in the Career Education Division. The instruments may be as simple or as complex as a school district wants them to be. (Samples are provided in Appendix A.)

In-service

Activities developed to aid the staff as they develop a career exploration program should be varied, and developed to meet the needs of the individuals. Activities such as workshops, visits to schools with programs, opportunities to review curriculum materials, time for development of curriculum, funds for materials, tools, field trips, etc., graduate courses designed for local needs, and/or opportunities for sharing with other teachers and the community may be provided by the administration and coordinated by a career education supervisor or the curriculum development committee.

Resources

A major concern of program developers is that of resources. Fortunately, since a career exploration program is community based, the resources should not be too expensive or unattainable. One of the most important aids is the development of a community resource file which identifies potential speakers, field trips and sources of free, inexpensive or for-loan materials. (See Appendix B for sample.) This file should be housed in the library with all other printed and audiovisual materials and multi-media kits and games which have either been purchased or locally developed. Each collection needs some basic research tools which can be selected from the bibliography accompanying these curriculum guides. A bibliography of these materials should be available to every staff member.

Conceptual Framework

Basic Purpose: The Career Exploration/Occupational Information Planning Curriculum Guides for Use at the Junior High/Middle School Level project is designed to involve students from grades six through nine in experiences which will facilitate their vocational maturity. A major goal is to help students (1) identify their career interests, abilities and desires, (2) become familiar with sources of career information, (3) develop methods of gathering career information, (4) conceptualize career development concepts so that they will be able to make wise tentative occupational preferences which will aid them in making wise career decision.

One focus of the curriculum materials is to have students review their interests, abilities,and desires as explanations are made in each of the cluster areas. Self assessment, setting goals, and re-assessment are important skills which may be developed as the student tries to project self into a number of work settings.

Providing students with the opportunity to locate and use sources of occupational information gives them a valuable tool for life. Activities have been designed to develop the skills of locating and using current occupational information.

Methods of gathering career information can only be developed by experience. Hopefully, the activities will provide experiences which will increase each student's ability to gather, assimilate and use career information in the decision-making process at any time period in the work life.

Concepts identified in disciplines are those ideas which students should comprehend in order to master the material at a given level. A conceptual framework gives organization and articulation to a program, be it reading, math or science. Educators also know that concepts are built upon through each activity in which the learner participates.

Career education concepts provide the same type of framework by giving focus to the activities being provided. Several researchers have developed lists of concepts which they deem the ones to be assimilated by students if they are to have a clear understanding of themselves and their relationships in the work world. Most of the concepts incorporated into this particular curriculum were selected from those identified by the Enrichment of Teacher and Counselor Competencies in Career Education project at Eastern Illinois University. These concepts were selected because of their clarity and the career development dimensions in which they were grouped.

There is a natural inclination of educators, when looking at a set of career education concepts, to think that all the concepts should be taught by each person providing career education experiences, or that the concepts should be divided by grade level or subject areas. The same problem faced the curriculum developers. Since the curriculum was established to study five occupational clusters, it became apparent that the concepts should be selected by identifying those which could most effectively be developed in a particular unit. It was difficult to determine which unit a concept fit best, as all of the concepts are important and could easily be stressed in every unit. However two or three concepts were selected to become the CAREER DEVELOPMENT FOCUS of each unit.

A MATRIX FOR THE INFUSION OF CAREER DEVELOPMENT CONCEPTS INTO THE CAREER EXPLORATION CURRICULUM

The following career development concepts have been developed within this curriculum guide. It is important to know that all of the concepts could be developed in any cluster. In order to give at least minimum exposure to each concept, special activities were designed within specific occupational cluster units. Teachers should be encouraged to develop any other concepts within their scope of "teachable moments" while teaching a unit.

	OCCUPATIONAL CLUSTERS				
	Applied Biological and Agricultural	Business, Marketing and Management	Health	Industrial Oriented	Personal and Public Services
	NO.	NO.	NO.	NO.	NO.
Career Information					
Basic career information will aid in making career-related decisions.				4	
Occupations may have certain dress requirements.			6		
Occupations require the use of specific materials and equipment.			2		
The individual worker determines which aspects of an occupation may be pleasant or unpleasant.					7
Occupations have their own vocabularies.			2		
Occupations have their own work settings.					2
Occupations require special personal characteristics.			3		
Earnings vary with occupations.		5			
Career development includes progression through stages of education and occupational training.		2			
Cost of training for occupations varies.	8				
Technological, economic, social, and political factors influence supply and demand of jobs.	2				

	OCCUPATIONAL CLUSTERS				
	Applied Biological and Agricultural	Business, Marketing and Management	Health	Industrial Oriented	Personal and Public Services
	NO.	NO.	NO.	NO.	NO.
Educational Awareness					
Educational skills and experiences are related to the achievement of career goals.	9				
Skills and knowledge in subject areas are helpful in occupational competence			6		
Career-oriented learning may take place in or out of school.		6			3
Learning is a lifelong process.			4		
Attitudes and appreciations					
Society is dependent upon the productive work of individuals.				6	
Completion of a worthwhile task has value for the worker and for society.					3
Work involves the acceptance of responsibility for a task.					9
Most occupations include common expectations such as punctuality, dependability, and avoidance of excessive absence.	1	1			
Specialized occupations result in an interdependent society.		5			6

Economic Awareness					
Individual economic needs and wants differ.		9			
Earnings vary among and within occupations.					3
Additional training and experience increase earning potential.					4
Obligations for fair pay and work are implied between employee and employer.				5	
Economic trends can influence a career choice.		3			1
Work is a means of gaining societal rewards.			4		
Skill Awareness					
All occupations require general and specific skills.				1	
Some skills are common to many career areas.	3				
Some occupations require skills using particular tools.	5				
Most occupations require skills and knowledge in communications, mathematics, organization, and/or problem solving.					4
All workers require skills to search for, locate and obtain career placement on an initial basis and for advancement.			8		
Career plans should be designed and executed with the understanding that evaluation and replanning may be necessary.					2
Most occupations require a beginning skill competency.			2		
Self-development					
An individual is influenced by other people.	3				
The school can provide an opportunity to enhance self-development.			6		
An individual's feelings and the feelings of others relate to commonly held beliefs and customs.		3			
Groups outside of school influence an individual's personal development.			3		
An individual is influenced by economic forces.				1	
Changes in an individual influence his environment and changes in environment influence the individual.			7		
An individual's values and personal goals are influenced by the values of other people.				9	
An individual should be aware of the tasks performed and begin to determine interests in these tasks.			2		

	OCCUPATIONAL CLUSTERS				
	Applied Biological and Agricultural	Business, Marketing and Management	Health	Industrial Oriented	Personal and Public Services
	NO.	NO.	NO.	NO.	NO.
Self-development Cont'd.					
An individual's interests, aptitudes, values, and achievements are not always the same as those of peers.	9				
An individual has social, physical, and intellectual aptitudes for various tasks.		7			
Individuals differ in their physical characteristics.				8	
Achievements in school and out of school are often dependent upon interests, aptitudes, and values.		4			
An individual can differentiate between self and others in terms of interests, aptitudes, values, and achievements in and out of school.	6				
There is a relationship among interests, aptitudes, achievements, values, and occupations.					5
Lifestyle					
Most people work and there are many reasons why people work.				5	5

Lifestyle Cont'd.					
Family members perform work they are capable of performing, responsibilities are shared, and the family is an interdependent unit.	1				
Lifestyles within a community differ.			5		
Relationships exist between a person's occupation and the people with whom a person tends to associate.			9		
Moral principles are a integral part of one's work life.		8			
Relationships exist between desired lifestyles and career monetary rewards.			1		
Leisure-time activities and interests may lead to a career, and one's career may, in turn, affect the amount and use of leisure time.				1	
Awareness of oneself within the context of the family structure is important.		6			
An individual experiences various roles--friend, student, group member, etc.				2	
There are certain physical, social, and emotional characteristics which make an individual unique.		4			
An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.			4		
One's membership in a group affects the group as well as oneself.	8				
Interests and abilities mature and change as well as one's physical being.					7
There is a relationship between an individual's knowledge and acceptance of self and career preference.			1		
Coping Behaviors					
Certain identifiable attitudes, values, and behaviors enable one to obtain, hold and advance in a career.					9
An individual should learn to cope with authority exercised by others.				2	
An individual should learn to cope with the rights and feelings of others.			8		
An individual should learn how to give and take criticism.	4				
A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.			9		
Certain behaviors are appropriate to specific job settings.	8				
There is a universalitity of feelings and aspirations of all people, regardless of physical appearance, nationality, creed, sex, or ethnic background.					5
There are effective interpersonal relations skills for giving or evaluating instructions.				6,7	
Different skills are required for different tasks.	6				

OCCUPATIONAL CLUSTERS

	Applied Biological and Agricultural	Business, Marketing and Management	Health	Industrial Oriented	Personal and Public Services
	NO.	NO.	NO.	NO.	NO.
Coping Behaviors Cont'd.					
Several skills may be required to perform a given task.				3	
Some skills can be transferred from one job to another.	5				
Performance requirements for a job vary with the work setting.			8		
It is important for a person to be able to make the transition from one job to another.		8			
Performance requirements for a job may change with time.			3		
There are characteristics which differentiate between occupations--both within and between job families.		1			
Decision Making					
Choice means "making up one's mind" and there are certain situations where one can make choices.					2
Things change and these changes influence the choices and decisions one makes.					7
An individual's decisions affect self and others.		9	8		
People change and these changes influence the choices and decisions one makes.					8

Decision Making Cont'd.

Decision making involves risks.	2				
Decision making can precipitate chain reaction.					3
Previous decisions, peers, gratifications, needs, interests, and career information influence present and future decisions.		7			
An individual should consider alternative ways to reach a given goal.	4				
Problems which conflict with one's own goals can be identified and assessed.	8				
An individual should recognize what "a goal" is and learn how to set one's own goals.			5		
Decision making plays a role in the setting of immediate and long range goals.			2		
The decision-making process can be used to set priorities in developing personal goals.				4	
Setting goals can be enhanced by analyzing decision-making processes.			1		

APPENDIX A

NEEDS ASSESSMENT

INSTRUMENTS

CAREER EDUCATION RESOURCE LABORATORY
Parents Survey

Center for Educational Studies
• Service
• Research
• Teacher Education
School of Education • Eastern Illinois University

Circle or check the answer you think is right.
If you don't want to answer a question, go on to the next.
Please complete both sides of this form.
Thank you for your time and cooperation.
We are surveying only 4th, 8th, and 11th grade students and their parents.

5 Grade level of your child or children -- fill out this form for the oldest child checked.
(1) _____ 4th grade
(2) _____ 8th grade
(3) _____ 11th grade

6 Relationship to child:
(1) _____ father
(2) _____ mother
(3) _____ other adult

7 Sex of child
(1) _____ male
(2) _____ female

Read each statement carefully and decide how you feel about it. There are five possible answers to each question. Please read each statement and circle one number.

1. SA - strongly agree
2. A - agree
3. U - undecided
4. D - disagree
5. SD - strongly disagree

SA	A	U	D	SD	
1	2	3	4	5	Schools are currently preparing students to make career preferences or choices.
1	2	3	4	5	The school's main responsibility is to help students prepare for careers.
1	2	3	4	5	Every student should have at least one skill in an occupation upon leaving high school.
1	2	3	4	5	The interest of parents should be considered in developing the school curriculum.
1	2	3	4	5	Parents should be informed about career educational experiences occurring in the schools.
1	2	3	4	5	Career education will be of greater long term value to boys than to girls.
1	2	3	4	5	Career education should help each student gain an understanding of himself and his capabilities.
1	2	3	4	5	The community is an excellent resource to use in a career education program.
1	2	3	4	5	A centralized career resource center with many types of career materials could be beneficial to me and my child in helping to make career choices.
1	2	3	4	5	It is important to involve parents in planning career education programs.

SA - Strongly agree A - Agree U - Undecided D - Disagree SD - Strongly Disagree

	SA	A	U	D	SD	
18	1	2	3	4	5	The educational program should provide students with experiences which show the relationship between subject matter taught in school and its use in the world of work.
19	1	2	3	4	5	Career development is a continous process throughout the lifetime of an individual.
20	1	2	3	4	5	There are good jobs that don't require a college education.
21	1	2	3	4	5	The main source of career information should be teachers.
22	1	2	3	4	5	Career education should serve all students in a school system.
23	1	2	3	4	5	The school guidance department should be responsible for the career education program.

Check ONE response:

24 Career education should begin in:
(1) _____ kindergarten
(2) _____ elementary grades
(3) _____ junior high
(4) _____ high school
(5) _____ college
(6) _____ not in the schools
(7) _____ in the home

25 At the present time my child receives most of his career information from:
(1) _____ parents
(2) _____ teachers
(3) _____ counselor
(4) _____ community

Name ______________________________ Occupation ______________

Place of employment ______________________________

Spouse's occupation ______________________________

Spouse's place of employment ______________________________

I could provide the following services or resource to a centralized career education resource laboratory.

26 _____ serve as a resource person by telling about my own occupation or hobby.
27 _____ serve as a resource person by demonstrating skills, tools, or machines used in my occupation or hobby.
28 _____ arrange for another person to share his occupation or hobby knowledge.
(Name ____________________ Occupation ______________
Address ______________________________ Phone ______________)
29 _____ arrange field trips for students.
30 _____ help supervise field trips for students.
31 _____ secure booklets, films, tapes, etc. pertaining to occupational information.
32 _____ other (specify) ______________________________

33 Could you arrange to have a group of students visit you at your place of employment?
(1) ____ yes
(2) ____ no

CERL Business and Industry Survey

Name of Plant or Business ____________________________________

Address ____

County ____________________ Phone ____________________

Main product provided ________________________________
or
Main service provided ________________________________

Name and title of manager or owner ____________________________

Please check (✓) the answer you think is right.
If you don't want to answer a question, go on to the next.
Thank you for your time and cooperation.

02 Under which one of the following occupational groups would you place your business or
03 industry?

(01) _____ business and office occupations
(02) _____ marketing and distribution occupations
(03) _____ communications and media occupations
(04) _____ construction occupations
(05) _____ manufacturing occupations
(06) _____ transportation occupations
(07) _____ agri-business and natural resources occupations
(08) _____ marine science occupations
(09) _____ environmental control occupations
(10) _____ public services occupations
(11) _____ health occupations
(12) _____ hospitality and recreation occupations
(13) _____ personal services occupations
(14) _____ fine arts and humanities occupations
(15) _____ consumer and homemaking-related occupations

Please check the classifications of personnel employed by your business or industry.

04 _____ non-skilled
05 _____ skilled
06 _____ managerial
07 _____ clerical
08 _____ service
09 _____ other (specify ______________________________)

10 How well do you consider the high schools have prepared your present employees to enter and progress in your company?

(1) _____ extremely satisfactory
(2) _____ above expectations
(3) _____ about average
(4) _____ below expectations
(5) _____ other (specify ______________________________)

11 Which type of high school graduate do you prefer to hire?

(1) _____ one with academic education only
(2) _____ one with academic education and a minor in vocational education
(3) _____ one with occupational or vocational education major
(4) _____ other (specify ______________________________)

12 For skilled jobs in your firm, who do you feel should provide direct occupational education or training?

(1) _____ high schools
(2) _____ 2 year or technical school
(3) _____ college or university
(4) _____ your firm
(5) _____ oth[illegible] ______________________________)

13 For managerial positions in your business or firm, who do you feel should provide direct occupational education or training?

(1) ____ high school
(2) ____ 2 year or technical school
(3) ____ college or university
(4) ____ your firm
(5) ____ other (specify ____________________)

For which personnel do you now give on-the-job training (structured)?

14 ____ all
15 ____ managerial
16 ____ skilled
17 ____ non-skilled
18 ____ service
19 ____ clerical
20 ____ none

21 Could your company or firm supply us with career information and materials that might aid your future employees?

(1) ____ We have material that would help.
(2) ____ We have material but feel it would not help.
(3) ____ We do not presently have material but could develop some.
(4) ____ We do not have material.

22 Do you feel that there is a need to coordinate resources and services of business and industry into a career education resource laboratory to be used by the schools?

(1) ____ yes
(2) ____ no

23 Do you feel that such a laboratory would help students make meaningful decisions in career development?

(1) ____ yes
(2) ____ no

Would you be willing to share any of the following resources or services with the schools of east central Illinois?

	Resource or Service	Subject Matter	Person to Contact	Address	Phone
24	____ talks	____	____	____	____
25	____ demonstrations	____	____	____	____
26	____ printed matter	____	____	____	____
27	____ films	____	____	____	____
28	____ on site field trips	____	____	____	____
29	____ on job student interviews of employees	____	____	____	____
30	____ others -- please list				
	____	____	____	____	____
	____	____	____	____	____
	____	____	____	____	____
	____	____	____	____	____

CAREER EDUCATION RESOURCE LABORATORY
High School Survey

Center for Educational Studies
• Service
• Research
• Teacher Education
School of Education • Eastern Illinois University

The following questions are about your school and jobs.
Circle the answer you think is right.
If you don't want to answer a question, go on to the next.
Please complete both sides of the paper.
Please give your teacher the form when you are finished.
Thank you for helping us.

05 Sex (check one):
(1) _____ male
(2) _____ female

06 My main field of study in high school is (check one):
(1) _____ home economics
(2) _____ business education
(3) _____ auto mechanics
(4) _____ industrial arts
(5) _____ agriculture
(6) _____ arts (music included)
(7) _____ college prep (math - English - foreign language - science - social studies)
(8) _____ other -- please list ______________________________

Read each statement carefully and decide how you feel about it.
The "undecided" answer should be circled only when you have no opinion.
Please rate your feelings on the following scale:

1. SA - Strongly Agree
2. A - Agree
3. U - Undecided
4. D - Disagree
5. SD - Strongly Disagree

	SA	A	U	D	SD	
07	1	2	3	4	5	Educational programs should be planned to help students prepare for career choices.
08	1	2	3	4	5	Every student should possess at least one skill in an occupation upon leaving high school.
09	1	2	3	4	5	Career development is a continous process throughout the lifetime of an individual.
10	1	2	3	4	5	The community is an excellent resource to use in a career education program.
11	1	2	3	4	5	Consideration should be given to the views of students in planning and evaluating a career education program.
12	1	2	3	4	5	Students should be knowledgeable about the world of work before leaving school.
13	1	2	3	4	5	The most important influence on an individual's occupational choice is his own set of values, interests, and needs.
14	1	2	3	4	5	All jobs are worthwhile.
15	1	2	3	4	5	A job determines the people with whom you associate.
16	1	2	3	4	5	It is important to involve parents in planning career education programs.
17	1	2	3	4	5	Career education should be only for those students who are not able to succeed in an academic program.
18	1	2	3	4	5	Representatives from business and industry can serve as excellent resource people for a career education program.
19	1	2	3	4	5	It is important for me to learn skills for more than one job.
20	1	2	3	4	5	It is all right to change jobs if you want a different one.
21	1	2	3	4	5	Being happy with a job is more important than the money you make on a job.
22	1	2	3	4	5	Most adults keep the same job throughout their lifetime.

1. SA - Strongly Agree 2. A - Agree 3. U - Undecided 4. D - Disagree 5. SD - Strongly Disagree

	SA	A	U	D	SD	
23	1	2	3	4	5	There are good jobs that don't require a college education.
24	1	2	3	4	5	It is necessary for me to learn about jobs now even if I plan to go to college.
25	1	2	3	4	5	Career education will be of greater long term value to boys than to girls.
26	1	2	3	4	5	People should be happy with their jobs.
27	1	2	3	4	5	A career resource center with many types of career information would be helpful to me in finding out about various job opportunities.
28	1	2	3	4	5	The school guidance department should be responsible for the career education program.
29	1	2	3	4	5	A good career education program would make school more interesting.
30	1	2	3	4	5	There would be fewer drop-outs if courses were related to jobs.

Check ONE answer:

31 My present courses are:
(1) ______ related to my future job interests.
(2) ______ of no value to my job interests.
(3) ______ of some value but could be better.

32 After high school I plan to:
(1) ______ get a job.
(2) ______ go to a technical school.
(3) ______ go to a junior college.
(4) ______ go to a 4-year college.
(5) ______ go to the armed forces.
(6) ______ undecided

33 Do you expect to have a full-time career someday?
(1) ______ yes
(2) ______ no
(3) ______ uncertain

34 For complete, accurate, up-to-date information related to careers I find the most helpful information from (check one):
(1) ______ counselors.
(2) ______ individual teachers.
(3) ______ the library.
(4) ______ parents.
(5) ______ individual courses.
(6) ______ career information center.
(7) ______ there isn't any place.

35 How many times did you talk to your counselor last year about a job now or after you graduate from high school or college?
(1) ______ never.
(2) ______ once.
(3) ______ twice.
(4) ______ more than twice.
(5) ______ I do not have a counselor.

Using a 5 point scale, rate your school on the following methods it uses to present career information:

1. E - excellent 2. G - good 3. A - average 4. P - poor 5. N - none

	E	G	A	P	N	
36	1	2	3	4	5	course work
37	1	2	3	4	5	counseling
38	1	2	3	4	5	films
39	1	2	3	4	5	speakers
40	1	2	3	4	5	slides
41	1	2	3	4	5	tapes
42	1	2	3	4	5	demonstrations
43	1	2	3	4	5	field trips
44	1	2	3	4	5	on-the-job interviews
45	1	2	3	4	5	student clubs

CAREER EDUCATION RESOURCE LABORATORY
Staff Survey

Please complete both sides of the first page and the appropriate section for you on the last page. Thank you for your time and co-operation.

Center for Educational Studies
• Service
• Research
• Teacher Education
School of Education • Eastern Illinois University

05 Please check your position.
(1) _____ elementary teacher
(2) _____ junior high teacher
(3) _____ high school teacher
(4) _____ counselor
(5) _____ principal
(6) _____ superintendent

Read each of the following statements carefully and decide how you feel about it. The "undecided" answer should be circled only when you have no opinion. Please rate your feelings on the following scale:

1. SA - Strongly Agree
2. A - Agree
3. U - Undecided
4. D - Disagree
5. SD - Strongly Disagree

	SA	A	U	D	SD	
06	1	2	3	4	5	Career education should be integrated into the regular curriculum.
07	1	2	3	4	5	Career education should be only for those students who are not able to succeed in an academic program.
08	1	2	3	4	5	Every student should possess at least one skill in an occupation upon leaving high school.
09	1	2	3	4	5	The school has the responsibility to help students make realistic occupational choices.
10	1	2	3	4	5	The community is an excellent resource to use in a career education program.
11	1	2	3	4	5	Elementary school is too early for a student to start thinking about career possibilities.
12	1	2	3	4	5	Teaching plans should be organized around people.
13	1	2	3	4	5	New facilities are needed in most schools to launch a career education program.
14	1	2	3	4	5	Schools should seek the advice of local citizens in planning and evaluating career education programs.
15	1	2	3	4	5	There is a need for the commitment of the school administration for a successful career education program.
16	1	2	3	4	5	Consideration should be given to the views of students in planning and evaluating career education programs.
17	1	2	3	4	5	It is important to involve parents in planning career education programs.
18	1	2	3	4	5	The choice of an occupation or profession is one of the most important decisions a person makes in his lifetime.
19	1	2	3	4	5	Schools are currently preparing students to make career preferences or choices.
20	1	2	3	4	5	The main source of career information should be the teacher.
21	1	2	3	4	5	Career education should be concerned with developing a positive self-image for each student.
22	1	2	3	4	5	Career education and vocational education are one and the same.
23	1	2	3	4	5	There would be fewer dropouts if courses were related to jobs.
24	1	2	3	4	5	Career education is just another fad that will soon be forgotten.
25	1	2	3	4	5	The school guidance department should be responsible for the career education program.

1. SA - strongly agree 2. A - agree 3. U - undecided
4. D - disagree 5. SD - strongly disagree

	SA	A	U	D	SD	
26	1	2	3	4	5	Representatives from business and industry can serve as excellent resource personnel for the career education program.
27	1	2	3	4	5	Career education should help students develop positive attitudes toward work.
28	1	2	3	4	5	Prospective teachers completing teacher education programs should be prepared to teach career education.
29	1	2	3	4	5	Career education should enhance the relevance of academic education for the students.
30	1	2	3	4	5	The educational program should provide students with experiences which show the relationship between subject matter taught in school and its use in the world of work.
31	1	2	3	4	5	Career development is a continuous process throughout the lifetime of an individual.
32	1	2	3	4	5	Experiences in career education should allow students to evaluate their interests and abilities.
33	1	2	3	4	5	Career education should serve all students in a school system.
34	1	2	3	4	5	Career education will be of greater long term value to boys than to girls.
35	1	2	3	4	5	Special emphasis in career education should be focused on helping the student to succeed.
36	1	2	3	4	5	Career education should include decision-making skills.
37	1	2	3	4	5	Information about emerging occupations should be included in the education curriculum.
38	1	2	3	4	5	Educating a student for change should be included in a career education program.
39	1	2	3	4	5	A job determines the people with whom you associate.
40	1	2	3	4	5	Career education is a way of life -- work plus leisure.
41	1	2	3	4	5	A career education center could help in counseling students to be more knowledgeable about the world of work, careers and their options.
42	1	2	3	4	5	A good career education program would allow counselors to spend more time on personal counseling of students.
43	1	2	3	4	5	There is a need to co-ordinate resources and services within the area to be used in career education programs.
44	1	2	3	4	5	It is important for the students in a rural area to know what jobs are available to them in the surrounding areas.
45	1	2	3	4	5	There is a need within the area for a complete, accurate, up-to-date career education resource center that would serve all grade levels of students, teachers, counselors, parents, and business and industry.

- -

To be used for list of available services and resources only.

Name ______________________________ Phone ______________

Address ____

I could provide the following services or resources to a centralized career education resource laboratory:

46 (1) ____ serve as a resource person by telling about my own occupation or hobby.
47 (2) ____ serve as a resource person by demonstrating skills, tools, or machines used in my occupation or hobby.
48 (3) ____ arrange for non-certified school personnel to share occupational knowledge.
(Name ______________________ Occupation ______________
Address ______________________ Phone ______________)
49 (4) ____ arrange for another person from the community to share his occupational knowledge.
(Name ______________________ Occupation ______________
Address ______________________ Phone ______________)
50 (5) ____ secure booklets, films, tapes, etc. pertaining to occupational information.
51 (6) ____ other (specify) ______________________________

To completed by SUPERINTENDENTS and PRINCIPALS only.

The State of Illinois outlines the following structure for a career education program:

Elementary Schools (K-6) -- career awareness
Junior High Schools (7-8 or 9) -- career exploration
High Schools (9 or 10-12) -- career orientation and preparation

Using the following 5 point scale, please rate your individual school or schools according to their involvement with a career education program.

1: following state model and doing good job.
2: following state model but needs improvement.
3: has an organized career education program other than state model.
4: has career education program but needs improvement.
5: has no career education program.

52 _____ elementary schools (K-6)
53 _____ junior high schools (7-8 or 9)
54 _____ high school (9 or 10-12)

To be completed by TEACHERS only.

Listed below are various methods of presenting career information. Please use the following number scale that corresponds with your answer for each response.

1: have used and was beneficial.
2: have used and was not beneficial.
3: would like to use if available to me.
4: have not used and would not like to use.
5: does not apply to my grade level.

52 _____ resource people from business and industry.
53 _____ parents as resource people telling about own occupation or hobby.
54 _____ field trips to places where goods are made.
55 _____ field trips to places where products are sold.
56 _____ field trips to places where services are provided.
57 _____ field trips to cultural, historical, science centers or places where things are grown.
58 _____ occupational role playing.
59 _____ slides, tapes, records.
60 _____ closed circuit TV career programs.
61 _____ interview people on the job.
62 _____ career information centers in individual schools.
63 _____ career kits.
64 _____ consultants to help integrate career education into the school curriculum.
65 _____ computerized career information.
66 _____ career night, day or week.
67 _____ resource people from within the school telling about own occupation or hobby.
68 _____ other -- please specify ______________________________

To be completed by JUNIOR HIGH and SENIOR HIGH TEACHERS only.

Please check your primary subject area;

69 _____ academic subject (math, science, social sciences, English)
70 _____ vocational education subject (business, home ec, industrial arts)
71 _____ fine arts (music, art, drama)
72 _____ all other (physical education, driver education, etc.)

To be completed by COUNSELORS only.

Please use the number that corresponds with your answer.

1. Y - yes 2. N - no

Y N When organizing my guidance and counseling responsibilities at the present time I:
52 1 2 have as much time as I would like for vocational guidance.
53 1 2 spend too much time on vocational guidance.
54 1 2 have as much time as I would like for personal counseling.
55 1 2 spend too much time on personal counseling.
56 1 2 spend too much time on scheduling, grade reporting, etc.
57 1 2 am happy with my time allotment.

In my school I presently:
58 1 2 have an up-to-date career information center for students and teachers to use.
59 1 2 am not interested in career education.
60 1 2 have a career information center but it is not as up-to-date as I would like.
61 1 2 would welcome an area career education resource laboratory that would have complete, accurate, and up-to-date career information and materials.
62 1 2 find sufficient time to compile and evaluate career information.

APPENDIX

B

RESOURCE FILE

RESOURCE FILE

MAJOR OCCUPATIONAL CLUSTER

____

OCCUPATIONAL UNIT

____

Name of business, industry or profession ______________________________

Address ______________________________ Phone ________________

Contact person ____

Position ______________________________ Phone ________________

Resource person(s) available to visit school:

Name	Occupation

Resource person available for on-site tours ______________________________

Maximum number of students allowed ____________

Minimum grade level of students accepted for tours ____________

Approximate time needed to make the tour ________________

Facilities for meals ______________________________________

Facilities for parking ______________________________________

Special safety precautions to be observed ________________________

____

____

Description of tour ______________________________________

____

____

Special instructional materials available on loan or free:

Exhibits ______________________________

____

Films ______________________________

____

____

Tapes ______________________________

____

Equipment /tools ______________________________

____

____

____

Printed materials ______________________________

____

____

Other ______________________________

____

____

____

Recommendations ______________________________

____

____

____

____

____

II.

CURRICULUM GUIDES

INTRODUCTION TO THE OCCUPATIONAL CLUSTER CURRICULM GUIDE

PURPOSE AND USE OF GUIDE

This guide is designed to be used as a tool for developing a career exploration program in the Junior High/Middle School. The emphasis of these materials is on: (1) Providing students with experiences in a wide variety of occupations; (2) reinforcing career development concepts; and (3) accenting relationships between school educational experiences and the application of those experiences to the work world. The suggested activities are intended to fuse the occupational information, career development concepts, and subject matter skills and concepts with relevant world-of-work activities.

Included in each unit are the career development concepts and lists of occupations around which the unit is focused and identification of relevant subject matter units. See Part III of this publication for a bibliography of sources of books, audiovisuals and free materials appropriate to each unit of study. Particular care has been given, through various types of activities, to provide for the student's self awareness of talents, interests and abilities, to eliminate sex stereotyping, and to provide experiences in decision making.

This guide has six major goals:

1. To provide a model for developing a career exploration curriculum in the junior high/middle school.
2. To suggest career exploration activities which can be infused into existing or new courses in the junior high/middle school.
3. To identify subject matter units relevant to the suggested activities.
4. To provide a bibliography of occupational information.
5. To provide students with opportunities to eliminate concepts of sexism in occupations.
6. To provide students with a sound base for making career decisions and achieving career goals.

GUIDE ORGANIZATION

For the convenience of the local curriculum development committee and instructional staff, this guide was designed in such a way that each unit could be a separate entity. If the curriculum committee wishes, each cluster may be separated to provide units to each subject area teacher; or a cluster may be taught by one instructor. (See "A Model for the Infusion of Course Exploration Activities Into the Existing Curriculum", in the Planning Guide.)

Each cluster guide contains nine units requiring a minimum of thirty-six class periods, with additional periods needed for field trips and/or sharing of some of the activities. A cluster may be taught every day as one six-week study, weekly for nine to eighteen weeks, or combined with other cluster units emphasizing a particular subject matter which would make up a unit of time acceptable to the curriculum committee.

Each unit is designed for at least four class periods, one for introducing the unit, two for in-class project development, and one for concluding the unit. The individual or small group activities may be done during class (requiring more class days) or as outside assignments. Speakers or films may be used as part of the introductory or concluding activities. Most importantly, opportunities should be given for students to share their findings with their classmates.

The units were developed to give students a comprehensive view of occupations, relevance to their educational program and enhancement of their career development. Each unit focuses on selected occupations, subject matter units and career development concepts. All of the career development concepts could be developed in any unit. However,in order to develop each concept as fully as possible only two or three are developed in each unit. The conceptual framework was developed by the Enrichment of Teacher and Counselor Competencies in Career Education project, at Eastern Illinois University. (See Planning Guide for Career Development Conceptual Framework.)

It is important to remember that the reason for providing the activities is to give the students experiences which will *provide the basis for making career choices* which can lead to fuller and more satisfactory lives. Those experiences should include hands-on activities, meeting with workers, going to work sites and relating those experiences to one's own interests, aptitudes, values,and needs.

GUIDE OUTLINE

It is expected that the career exploration program will be localized. Therefore this guide was designed to be adapted to the local situation by adding and/or expanding activities to meet the student needs and available resources. The following outline is provided as an aid for understanding this particular curriculum guide as well as adapting the materials to the local program.

1. Preface--May be duplicated and distributed to students.
    a. Provides background to pique student interest.
    b. Includes overview of employment outlook.
    c. Relates occupational study to career development concepts.
2. Instructional Information
    a. Career Development Focus identifies concepts to be reinforced in the unit.
    b. Subject Matter Area Relationship identifies subject matter units most appropriate for infusion of the career exploration unit.
    c. Occupations list identifies occupations which are representative of those to be introduced through the unit.
3. Teaching stragegies
    a. Goals
        (1) Based on the career development concepts.
        (2) Based on occupational information to be gathered.
        (3) Based on occupational competencies to be experienced.

b. Introductory Activities
  (1) Designed to promote growth of career development concepts within the student.
  (2) Designed to provide specific content information.
  (3) Designed to stimulate interest in individual activities.

c. Individual and/or Small Group Activities
  (1) Designed to meet individual needs, aptitudes, and interests. (Students select activities to do).
  (2) Designed to stimulate the inquiry method of learning.
  (3) Designed to be completed as out of class assignments.

d. Evaluation Activities--Based on Goals, with quality and quantity of knowledge or skill to be determined by the individual instructor.

A Bibliography which identifies appropriate books, audiovisuals, and free materials which are usually on a single copy free basis is found in Part III of this publication.

Some examples of Local Resources such as field trips, speakers and materials available in the community, with specific resources to be identified by the local instructor, are in the bibliography in Part III of this publication.

ROLE OF THE TEACHER

The teacher has an important function as the facilitator of the career exploration program. The enthusiasm and interest shown in the activities will affect the students' interest. The importance of showing subject matter relevance cannot be overly stressed. Insisting that both sexes "try on" non-traditional as well as traditional roles will help open the thinking of students. Role playing by students of both supervisory and support roles will broaden the concept of the responsibilities of all workers in the occupational hierarchy.

DATA GATHERING EXPERIENCES

A good career education program will provide students with as many contacts with workers as possible. This may be done by having speakers visit the classroom, by taking field trips, or by having contact with working adults with whom students are familiar.

Speakers who visit the classroom should be encouraged to bring tools or products associated with their occupations. Samples which the student can use help students visualize the workers' activities. *A well-planned classroom interview includes preplanning with the worker. It also includes preparing with the students a list of questions which are sent to the interviewee ahead of time.* It is important for the teacher to know when to conclude an interview. Have activities planned so that the interview isn't *stretched* to fill the time, making the interviewee and students uncomfortable.

An important aspect of communication is to be able to construct and ask pertinent questions and then to assimilate and use the data. The following list of suggested topics may aid students in developing interview questions.

1. Job title and/or description.
2. Description of workers' tasks.
3. Talents or skills important for success in this job.
4. Service oriented--deals with the public.
5. Product oriented--deals with things.
6. Research oriented--deals with ideas.
7. Working with others or individually to accomplish a task.
8. Best points of the job.
9. Worst points of the job.
10. Pay very good, adequate, unsatisfactory.
11. Pay--relationship to other jobs on a similar level, above, equal or below.
12. Employment outlook: Now--future.
13. Changes which have occurred during employment in the field.
    a. Equipment
    b. Automation
    c. Training requirements
    d. Personnel
    e. Pay
14. Degree of difficulty of entrance into a given occupational field.
15. Relevance of occupational activities to student's educational experiences.
16. General information on working conditions, peer relationships, fringe benefits, etc.

Field trip experiences show persons at work, thereby providing the setting to broaden occupational awareness and providing students with first-hand concrete experiences. When setting up the field trip, include time for students to interview various workers. It will be of help to send ahead some of the questions that the class has prepared so that the interviewee may be prepared. By planning with students what kinds of information they are to gather, they will not only learn more about products, services,and people, but will gain knowledge of themselves. Participating in a field trip experience may broaden the student's educational experiences and should develop positive attitudes toward the world of work.

The use of local workers as resource persons can be a valuable source of occupational information. Use these workers to:

1. Emphasize requirements of workers in this occupation.
    a. Educational
    b. Physical
    c. Social
    d. Emotional
2. Relate the use of educational experiences.
    a. Subjects such as math, reading, and science, spelling
    b. Specialized training, tools and vocabulary

3. Develop attitudes toward job duties.
    a. Activities they like
    b. Activities they don't like
4. Identify the effects of decision making on a career.
    a. Immediate
    b. Long range

Most workers have specific information about their specific jobs, but the student will need additional resources for comprehensive data. Students should be familiar with resources such as the latest editions of the Dictionary of Occupational Titles, The Occupational Outlook Handbook, occupational monographs distributed by various organizations, and audio-visual materials illustrating the work setting.

Various means should be used to share the field trip experience with classmates, other than "writing up." If small groups go on the field trip then a more enthusiastic sharing with classmates on return to school may take place without teacher prodding, since half the fun of taking a trip and much of the assimilation of information comes from being able to tell others about the experience.

SELECTION OF ACTIVITIES

The *Introductory Activities* in each unit are not listed in order of priority or in an order for presentation. It is up to the instructor to select the activities they would like to develop, based on the needs of the students. Most of the *Introductory Activities* call for total class participation. These activities may be class discussions, films, field trips, development of job survival skills and introductions to career development concepts. The activities are designed to give basic occupational information and opportunities to develop the career concepts identified under the *Instructional Information*. Additional activities may be developed where further experiences are needed.

Each unit has a variety of activities based on selected occupations and focused on specific career development concepts. There are a number of activities appropriate to all units which are listed here to save repetition.

1. Have a committee of students (preferably different ones for each unit) help plan and implement introductory activities.
2. Go to a place of employment well ahead of time to take pictures to be made into slides to show the class as an introductory activity.
3. Have students prepare a package of occupational information which includes:
    a. Brochures
    b. Tools associated with occupations
    c. Pictures of work settings
    d. Activities related to occupations
4. Show occupational films and filmstrips listed in the bibliography for each unit.
5. Take field trips.
6. Invite workers to the classroom to be interviewed.

7. Develop contracts with students to complete the following activities:
    a. Conduct an interview.
    b. Prepare a tape of the interview.
    c. Photograph the interview.
    d. Prepare a display of magazine pictures of people at work in the particular occupation being studied.
    e. Write a thank you letter to the interviewee.
    f. Prepare a report on the occupational study.
    g. Write to sources for additional information.
    h. Complete one or more of the "Individual and/or Group Activities" in the unit being studied.

Of upmost importance is the understanding that these are exploration activities designed to provide students with some occupational information and experiences. The activities were designed to give students a better idea of what people do at work, where they work, their work survival skills, a better understanding and appreciation of what is entailed in job preparation, getting and keeping a job, and an opportunity to assess their qualifications and interests in a variety of occupation.

EVALUATION OF STUDENT PERFORMANCE

Evaluations should be made of the student's progress in reaching the *Goals* set for each unit. It has been left up to the individual teacher to develop the behaviorial objectives, based on the unit goals, which they wish their students to reach. In this way teachers decide the QUANTITY and QUALITY of the work they expect their students to produce.

INTRODUCTORY AND CONCLUDING UNITS

The first unit in this guide "Introductory and Concluding Unit for a Career Exploration Program for Junior High/Middle Schools" is designed to introduce students to the career exploration program and to provide an opportunity at the conclusion of the program to review experiences and synthesize the learnings gained during the exploratory process.

The introductory unit introduces the idea of developing a personal "Personnel File" as a means of storing information for later use. This file is referred to many times when materials are to be added from activities in the Cluster Units.

The concluding unit reviews the cluster activities and prepares the student to analyze the data gathered. The use of these units can provide the "thread of continuity" within the cluster studies.

INTRODUCTORY AND CONCLUDING UNITS FOR A CAREER EXPLORATION PROGRAM FOR JUNIOR HIGH/MIDDLE SCHOOLS

PREFACE

Knowledge of self plus knowledge of careers can equal satisfactory career choice. In a time of rapidly changing technology, and hence changing occupations, developing the *ability* to make a career plan is more significant for the junior high/middle school student than making a career decision.

Emphasis in the following units on career exploration is on helping students learn how to gather information, what questions to ask, how to ask them and where to find the answers, and how to talk to people within the occupations to get the kind of information needed. When making career choices, students need to be able to look not only at up-to-date information about salary, benefits, and requirements, but at how an occupation will affect lifestyle, the kinds of coping behaviors needed, and one's continuing self-development. Today's students will have to be more adaptable than any generation of workers preceding them. Their ability to relate knowledge of self to labor needs can increase the ability to make satisfactory career choices.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Work affects an individual's way of life in that a person is a social being, an economic being, a family being, a leisure being, and a moral being.
2. An understanding and acceptance of self is important.
3. Basic career information will aid in making career-related decisions.
4. Data collecting skills are required to gather information pertinent to career decision-making.
5. Educational skills and experiences are related to the achievement of career goals.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Unit on understanding the self, the world of work, and the self in relation to the world of work.
2. Language Arts - Unit on data collecting to help students search out information which is currently relevant to student needs.

C. OCCUPATIONS - Units developed from the Illinois Occupational Cluster System

1. Applied Biological and Agricultural Occupations
    - Animal Production
    - Plant Production
    - Supplies
    - Service
    - Mechanics
    - Products (Processing, etc.)
    - Ornamental Horticulture
    - Renewable Natural Resources
    - Forestry
2. Business, Marketing and Management Occupations
    - Clerical-Bookkeeping/Accounting-Secretarial
    - Electronic Data Processing
    - Promotion and Marketing Research
    - Purchasing and Sales
    - Distribution (Transportation, Storage and Stock Control)
    - Top Management
    - Personnel Management
    - Production Management
    - Finance, Credit and Insurance
3. Health
    - Medical
    - Dental
    - Nursing

    - Health and Medical Research and Communications
    - Physical, Mental and Social Rehabilitation
    - Clinical Laboratory and Related Technical
    - Environmental and Public Health
    - Administrative, Business and Clerical
    - Other Related Health Specialties
4. Industrial Occupations
    - Construction Trades:
        - Builders
        - Finishers
    - Extraction of Raw Materials
    - Manufacturing and Production
    - Maintenance, Service and Repair
    - Communications:
        - Graphic
        - Electronic
    - Electronics and Instrumentation
    - Energy and Power
5. Personal and Public Services
    - Hospitality and Recreation
    - Clothing Management, Production and Service
    - Institutional and Home Management
    - Home Furnishings, Equipment and Service
    - Human Development Service
    - Protection Service
    - Transportation
    - Government
    - Personal Service

INTRODUCTORY UNIT

(This unit precedes the exploration of careers in the accompanying cluster curriculum guides)

II. TEACHING STRATEGIES

A. GOALS

1. To identify one's own lifestyle preferences in relation to career choice.
2. To identify one's strengths and limitations, to remediate limitations where possible, and to accept those that cannot be remediated.
3. To name the five Illinois Occupational Clusters and give a brief description of each.
4. To demonstrate data-collecting skills required to gather information pertinent to career decision making.
5. To identify the relationships between educational skills and experiences and the achievement of career goals.

B. INTRODUCTORY ACTIVITIES

1. Have the students fill out the questionnaire, "To Thine Own Self be True", as the first activity in this program. FILE THIS FORM for comparison at the end of the career exploration program.
2. Discuss in class what goes into an individual's personnel file where one is employed. Continue with a discussion of what individuals need to know about themselves and about careers to make a satisfactory career choice. Plan with the class the development of a personnel file for each student. (This file will be the depository for information gathered during the career exploration program, including "To Thine Own Self Be True", "Individual Profile", "Resume". and "Job Application", forms.)
3. Have students record in their personnel files the data they gather about themselves and about occupations. This is a continuing activity that should be done with every unit studied. Arrange with the students a system of safe-keeping and also ready accessibility of the personnel files. Be sure that everything that goes into the file is dated.
4. Arrange with the counselor to have all students take interest and aptitude inventories.
5. Ask the counselor to visit the class to explain standardized test scores, e.g., average scores and range of scores, to help students understand kinds of data available.
6. Plan for the teacher, counselor, or other qualified person to interpret to students individually, the results of tests and inventories they have taken. Be sure each student understands his/her scores, and respects the right to privacy of scores. Help the student identify personal strengths. Discuss how the student feels about the scores, what, if anything,

can be done to change future scores, how to live with limitations and make the most of them, and any other concerns the student may have. Complete the Individual Profile.

7. Plan with the librarian for a class visit to the library or instructional materials center to find out what career exploration materials are available.
8. List career exploration materials available in the library or instructional materials center.
9. Prepare a panel discussion to present to the class an overview of the Illinois Occupational Cluster system. (See occupations listed in each occupational cluster unit.)
10. Have students list the classes they have, and describe ways in which each one may be helpful in achieving career goals. Prepare copies of this for students to place in their personnel files.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES (All students should be involved in all of the following activities to give them the necessary background for future units.)

1. Interview two persons employed in widely differing occupations, e.g., a long distance truck driver and an x-ray technician, to discuss the effects of their jobs on their lifestyles. Did their lifestyle preferences affect their job choices? Interview two persons of different sex who have the same occupation. Ask the same questions.
2. Prepare and present a debate on: Be it resolved that for junior high/middle school students, knowing how to prepare a career plan is more important than the plan itself.
3. Prepare a description of a preferred lifestyle. Include hours of work, kinds of activities on the job, housing, geographic location, recreation, community and church interests, if any, and continuing education. Place this in your personnel file. Describe how career choice affects lifestyle.
4. Have students apply for a social security card if they do not already have one.
5. List three things that are important to you in each of the following aspects of life: Social, economic, family, leisure, moral, educational. Explain how these are affected by choice of a career. Place this in your personnel file.
6. Choose one of the five occupational clusters and explain why you might like to have a job in that one. Place this in your personnel file.
7. List the strengths and limitations you have recognized in yourself and that others have identified. Explain how you plan to remedy some of the limitations, and learn to live with others. Explain how you plan to use the strengths. Place this in your personnel file.

Activity B-1

"To Thine Own Self Be True"

Date ____________________

Name ____

School ____ Grade __________

1. I think I would choose to be a ______________________________ as my first occupational choice.

2. I think I would choose to be a ______________________________ as my second occupational choice.

3. Describe briefly how you made your first career choice.

4. List anything you think you need to know about your first occupational choice before you begin preparation for that first job.

5. List ways you think your occupational choice will affect your lifestyle.

6. List sources you would use to get occupational information.

Activity B-2

Individual Profile

Name ______________________________ Birth Date ____________

Attendance Record: Days present in school: Last year ______________

This year, first semester _________; second semester ______________

Grades

Last year 19___ - 19___ This year 19___ - 19___

Quarters	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Subjects								
Lang. Arts								
Soc. Stud.								
Math								
Science								
Phys. Ed.								

Aptitude Scores
Name of Inventory __________________ Date given _________
(Place press-on label here, or write sub-titles and scores. Be sure to indicate type of scores.)

Interest Scores
Name of Inventory __________________ Date given _______
(Place press-on label here, or write sub-titles and scores. Indicate type of score.)

Achievement test
Name of Test ______________________ Date given ______

(Place press-on label here, or write sub-test titles and scores. Indicate type of score.)

CONCLUDING UNIT

(This unit follows the completion of the exploration of the five occupational clusters in the accompanying cluster curriculum guides)

I. TEACHING STRATEGIES

A. GOALS

1. To identify changes in one's preferred lifestyle that may have occurred since the beginning of the career exploration program, and to relate the preferred lifestyle to a career choice.
2. To identify any changes in individual strengths and limitations since the beginning of the career exploration program.
3. To demonstrate the relationships between educational skills and experiences and the achievement of career goals.
4. To draw up a plan to follow in the career decision-making process.
5. To make a tentative career choice, demonstrating the use of data-collecting skills.

B. ACTIVITIES (All of these activities are designed to help students to pull together what they have learned about themselves and about careers during the career clusters study. Therefore, every student should be involved in all of the activities, either individually or in small groups. Some time may also be well spent in sharing ideas or learnings not previously shared.)

1. Prepare a description of a preferred lifestyle. Include hours of work, kinds of activities on the job, income, housing, geographic location, recreation, community and church interests, if any, and continuing education. Compare this description with the one you wrote in the Introductory Unit. How does career choice affect one's lifestyle?
2. Review your personnel file to see whether interests, abilities, values and preferred lifestyle have changed since the start of the career exploration program.
3. Select an occupation of most interest from all of the units studied. Prepare a report on that occupation. Include training and experience required, working conditions, job activities, current entry level salaries, opportunities for advancement, and what may happen to that job several years from now.
4. Compare what you have learned about yourself with what you have learned about the occupations you would like to have. Is it a match? Or are there some discrepancies? Can the discrepancies be overcome? If so, how? Or do you need to continue studying yourself and careers before making a decision?
5. Discuss in small groups the questions in activity four. What is the consensus of the group about career exploration, career planning, and career decision making? Once a career decision is made, will a new one ever have to be made?
6. Review the list of classes made in the Introductory Unit which described ways in which they could be helpful in achieving career goals. Add any additional ways that have been dis-

covered. Name favorite classes and explain how an interest in those classes may affect career decision making.

7. Prepare an outline to follow in studying self and occupations in the career decision-making process. Compare the outline with those of others and make modifications that would make the outline more workable.
8. Discuss in a small group the times in life when one might need to review a career choice and perhaps make new choices. Will an outline be useful then?
9. Write a brief resumé (see form at end of unit) about yourself as part of the process of applying for a job. Write a brief summary of a career you would like to have. Compare the resumé and the summary. Describe how they fit together. If there are any discrepancies, can anything be done about them? If so, what?
10. Describe the process of gathering data about oneself and about occupations. Explain how this data could be used in career decision making.
11. List the changes you have discovered in your preferred life-style and in your strengths and limitations. Make some guesses about changes that may occur as you mature.
12. Complete the sample job application form.

Fill out again the form, "To Thine Own Self Be True", used in the Introductory Unit, Activity B-1. Compare the responses on both forms. Be sure both are dated and place in personnel file for future reference.

Activity B-9

Resumé

Name:

Address:

Telephone:

Occupational Goal:

Work Experiences:

Employer	Job Title	Duties	Salary

Education: (courses especially meaningful to reach occupational goal and special after school activities)

Hobbies and interests:

References:

Activity B-12

JOB APPLICATION FORM

PLEASE PRINT

Name: ______________________________

Address: ______________________________

Telephone No.: ______________ Social Security No.: ______________

Birth Place: ______________ Birth Date: ______________

Marital Status: ___single ___married ___divorced ___widowed ___separated ___engaged

Number of children: ____________ Year of birth of each ____________

Education: _____last grade completed ________degree received _____date

WORK EXPERIENCE (in chronological order, most recent job first):

Employer and Address	Job Title	Dates Worked

REFERENCES

1. ______________________	2. ______________________
name	name
______________________	______________________
street	street
______________________	______________________
city state zip	city state zip

Hobbies: ______________________________

____

Employment objective: ______________________________

____

Position applying for: ______________________________

Date Available for Work: ______________________________

OCCUPATIONAL CLUSTER

"A"

APPLIED BIOLOGICAL AND AGRICULTURAL

TABLE OF CONTENTS

Applied Biological and Agricultural Occupations Units

1. Animal Production ... 69
2. Plant Production ... 73
3. Supplies ... 77
4. Services ... 81
5. Mechanics ... 85
6. Products (Processing) ... 89
7. Ornamental Horticulture ... 93
8. Renewable Natural Resources ... 97
9. Forestry ... 103

1

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

ANIMAL PRODUCTION

PREFACE

Agricultural Animal Production is the raising of livestock for the purpose of increasing the quantity and quality of products and offering these products for sale. High agricultural production requires people with a high degree of knowledge and skill in the animal sciences and/or business management. The principal activities deal with the quantity production of quality foods and non-foods needed for humans and other animals, as well as with the improvement of production practices by better breeding, feeding, and management techniques.

In 1950 the average farmer could produce enough food and fiber for about 16 other persons. In 1976 each farmer fed and clothed 53 persons. By 1980 it is expected that each farmer will be able to produce enough for 65 persons. The Illinois farmer produces enough food and fiber for 100 persons each year.

Students interested in animals should be encouraged to consider a career in raising food animals such as cattle, chickens, fish, swine, etc., or pleasure animals such as horses, cats, dogs, fish (tropical), or birds. Whatever type of animal production is chosen, careful consideration should be given to an interest in scientific knowledge of genetics, nutrition, and business management.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Family members perform work they are capable of performing, responsibilities are shared, and the family is an interdependent unit.
2. Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absences.

B. SUBJECT MATTER AREA RELATIONSHIP

1. Science - Units on animal life, including an introduction to genetics.
2. Health - Units on nutrition.

C. OCCUPATIONS

Stock ranch supervisor
Sheep rancher
Ranch or farm manager
Animal nutritionist
Animal groomer
Pet shop attendant
Dog breeder
Poultry breeder
Horse farm manager
Horse buyer or agent
Horse extension specialist
Horse exhibitor
Dairy operator
Rabbit farmer
Tenant farmer
Aviarist
Shellfish farmer
Cattle producer
Farm or ranch hand
USDA inspector
Swine farmer
General farmer
Beekeeper
Poultry farm manager
Hatchery manager
Horse trainer
Horse farm supervisor
Horse breeder
Cow puncher
Feed lot manager
Fish farmer
Farm owner/operator
Frog farmer

II. TEACHING STRATEGIES

A. GOALS

1. To know the effects of work habits on job success or failure.
2. To understand the need for and results of family members' sharing in the responsibilities of a home and financial situation.
3. To explore occupations in ANIMAL PRODUCTION.

B. INTRODUCTORY ACTIVITIES

1. Prepare a job chart for a typical urban family, through a class discussion. Identify jobs for young children, teenagers, parents, and grandparents. Discuss the importance of contributions to the family finances.
2. Prepare a job chart for a rural family which is farming either part or full time. Identify how each person's responsibilities contribute to family finances.
3. List in one column some typical tasks held by each member of a typical urban or rural family; in a 2nd column identify those tasks that require punctuality; in a 3rd column rank the jobs in order of dependence the family has on the worker; in a 4th column indicate the effect absences from the home will have on the completion of the tasks. Compare this activity with job performance requirements.
4. Have each student select an occupation in which he/she is interested and prepare a short essay describing how punctuality, dependability, and avoidance of excessive absences will affect success in getting and keeping a job in that occupation.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a bulletin board showing the animals that are grown for sale in your area. Include those for food, furs, pleasure, and scientific purposes.
2. Select a food you like which comes from an animal. Research the feeding and breeding practices which have improved the product.
3. Select an animal used for pleasure such as horse, a dog, a cat, or a bird. Identify the breeding problems encountered in developing a new breed.
4. Prepare a report on the raising and use of laboratory animals.
5. Prepare a chart showing cattle, swine, or sheep being processed and moved from farm to market. Identify by occupations the various people who are involved in preparing the product for the consumer.
6. Gather data from the livestock exchange. Identify factors which affect prices. Prepare a short report explaining how a farmer decides when to sell animals.
7. Interview an animal producer to find out (1) the extent to which the family is also involved and how this particular

occupation affects lifestyle, (2) special skills required to work with animals, and (3) how decision making involves risk taking and chain reactions.

8. Prepare a report on feedlot operations. Prepare an illustration of a feed lot. Include the management of waste materials.
9. Secure judging materials from your local FFA or County Extension Advisor. Select an animal you would like to show and judge it. Prepare written statements which identify outstanding points and poor points of the animal.
10. Prepare a report on one of the following: Beef farmer, cattle rancher, dairy farmer, sheep farmer, poultry farmer, fish farmer, frog farmer, apiarist, aviarist, or shellfish grower. Identify skills needed, problems faced, and the importance of good work habits.
11. Write a short essay describing the student's responsibilities within the family. Emphasize how the acceptance of these responsibilities will contribute to career success.
12. Write a short essay describing how individual family members can contribute to the well-being and general welfare of other members of the family.
13. Prepare a display of the many products produced by a particular animal, e.g., cattle: steaks, leather, etc.
14. Visit the high school agriculture department. Discuss with the students their animal production activities.
15. Visit an animal production farm. If others in your group visit different types of farms give a comparison report. Emphasize effects of occupation on lifestyle, and types of decision making and educational skills required for success.

2

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

PLANT PRODUCTION

PREFACE

The need for better trained farm operators and farm workers will increase as farming becomes more scientific. College training is becoming the rule rather than the exception for young "commercial" farmers. An understanding of biology, engineering, chemistry, and agronomy are necessary for today's successful farmer. While agricultural production will still offer challenging and rewarding careers with larger incomes and better living conditions than it used to, it will offer them to fewer and fewer people. Higher farm productivity has been accomplished significantly by increased use of power machinery and equipment, and applications of fertilizers and other agri-chemicals.

The production of corn, wheat, grain sorghums, and forage crops requires the use of a variety of farm machinery and equipment. For many farms producing crops, the work requirements are seasonal. Cash grain farmers are subject to major risks due both to weather and to fluctuation in prices for their grains. Investments in land, power, and equipment on the usually large acreage is very high. Thus, total risk is very high and management is critical.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Decision making involves risks.
2. Technological, economic, social, and political factors influence supply and demand of jobs.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on plants.
2. Social Studies - Units on feeding the world's population and on international trade.
3. Health - Units on nutrition.

C. OCCUPATIONS

Farm manager
Farm laborer
Grain and/or forage farmer
Seed grower
Fruit farmer
Seed production manager
Tobacco farmer
Tenant farmer
Farm supervisor
Sharecropper
Head irrigator
Range technician
Vegetable farmer
Orchardist
Cotton farmer
Hay farmer
Farm owner-operator

II. TEACHING STRATEGIES

A. GOALS

1. To identify risks which are involved in decision making.
2. To identify factors that influence the supply and demand of jobs.
3. To explore occupations in PLANT PRODUCTION.

B. INTRODUCTORY ACTIVITIES

1. List risks involved in pursuing a career such as law, teaching, carpentry, farming, floral, or truck driving, e.g., few job openings, seasonal work, crop failure, late delivery from wholesaler, breakdowns, and repairs. Discuss factors which would make it worth taking the risks, e.g., desire, skills, parental pressure, partnerships, inheritance, etc.
2. Discuss how technology has affected plant production, reduced the number of farmers, but increased the number of service occupations.
3. Discuss how supply and demand can be regulated by government sales to other governments, how sales affect agricultural economics, and how food supplies can be and have been used as bargaining agents. Relate these factors to effects on the individual producer and consumer.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Select a plant crop grown in the area and research the following items:
    a. Skills needed by the farmer.
    b. Investments in land, equipment, and supplies.
    c. Risks.
    d. Workers and responsibilities.
2. Prepare a display of the crops grown in the state. Indicate uses and markets for these crops.
3. Prepare a graph showing exports and imports of plant products.
4. Arrange with your high school agricultural instructor or the county farm advisor to help demonstrate testing of soil samples.
5. Experiment with plant growth by using different kinds of fertilizer. Keep records and record your findings in a visible manner.
6. Follow the commodity exchange for at least two weeks. Find out what makes prices fluctuate and how a farmer decides when to sell a crop.
7. Do some desk farming by planning a truck farming plot. Indicate your reasons for each crop selection.
8. Visit an orchard or vineyard. Compare it to other crop farms. Are the risks the same?
9. Prepare a demonstration of how technology has changed today's farm from farms 100 years ago. How have changes affected occupations?
10. Grow some bean sprouts in your classroom, fix them in an oriental dish.

11. Prepare a report on growing cultivated mushrooms and hunting for wild mushrooms. Explain how growing mushrooms requires a special setting.
12. Prepare a presentation showing the growth in per acreage production. Include factors affecting the increase such as fertilizers, equipment and quality of seed.
13. Prepare a report on the work settings of persons growing vegetables. Include green houses as well as open farms.
14. Prepare a demonstration of hydroponics. Forecast the occupational changes expected for producing crops by this method.
15. Prepare a "Like or Dislike" chart which would help others make a decision about an occupation in plant production.

3

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

SUPPLIES

PREFACE

In an age of specialization, the agriculturalist must depend on others to provide the supplies necessary to produce a product. These supplies may be the seeds necessary for new crops, fertilizers, and chemicals. Developing new materials that are ecologically sound as well as productive is challenging. Agricultural supply businesses are localized by the geographic areas where the supplies are to be used.

Workers may find health risks higher than in some other occupations. Opportunities for people interested in scientific and selling activities will find it worth their time to explore this unit further.

Because many of the occupations in this unit can be seen as sales positions it will be important to understand that individuals are influenced by other people. The influence of suppliers will affect the economics of the buyer, whether or not the product works as claimed.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual is influenced by other people.
2. Some skills are common to many career areas.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on chemicals and soil nutrients.
2. Language Arts - Units on communication skills.

C. OCCUPATIONS

Feed grinder
Feed mill superintendent
Feed company manager
Agricultural chemical inspector
Fertilizer mixer and blender
Fertilizer plant manager
Research technician
Seed grader
Seed salesperson
Seed store manager
Feed mixer or grinder helper
Feed salesperson
Feed store manager
Weed abatement supervisor
Agricultural chemist
Formulation specialist
Fertilizer salesperson
Feed and fertilizer inspector
Seed cleaner operator
Seed mill supervisor
Seed company field servicer

II. TEACHING STRATEGIES

A. GOALS

1. To identify ways the individual is influenced by others.
2. To identify some agricultural skills which are common to other occupations.
3. To explore occupations in AGRICULTURAL SUPPLIES.

B. INTRODUCTORY ACTIVITIES

1. List the different ways an individual is influenced to purchase a particular brand of shampoo. Compare the methods used to influence a shampoo purchaser with those used to influence farmers selecting supplies they need. Conduct a survey to see which method is most effective--T.V., radio, magazines, sales pitch in store, or friends. (See Supplement)
2. Compare the skills needed to provide the farmer with supplies, with those skills needed for supplying other businesses with their supplies.
3. Identify supplies that are common to the crop farmer and animal farmer.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. List the businesses which provide agricultural supplies in your area. The yellow pages of the telephone book is a good resource.
2. Prepare a display of fertilizers. Label each as to purpose and application method.
3. Prepare a chart of chemicals used in farming. Identify purpose and method of application.
4. Prepare a display of feeds appropriate to a particular animal.
5. Prepare a visual report showing the various supplies needed to produce a particular crop.
6. List the competencies needed by a supplier of feeds, chemicals, fertilizers, or seeds. Identify those competencies which can be acquired in school, e.g., scientific knowledge, in science class, persuasive speeches in speech class, etc.
7. Prepare a report about hybridizing a particular plant. Show the steps followed and information needed to develop new strains.
8. Visit an agricultural supplier to identify supplies used in agriculture.
9. Invite a resource person to speak to the class about the many occupations providing supplies to the farmer.
10. Visit a feed store and prepare a list of items stocked to feed and care for a particular animal. Interview the owner to determine specialized knowledges required for success in this type of business.
11. Prepare a display of ways in which weeds spread using dried and pressed plants. Indicate agents used to control weed growth.

Activity B-1

Select five people to interview. Tally their responses as to what factor influences them the most when purchasing an item. Add your own suggestions to the list.

	FACTORS									
ITEMS	Television ads	Radio ads	Magazines Ads	Billboards	Parents	Friends	Personal tests	Consumer Reports	Salesclerk	Teachers
1. Toothpaste										
2. Shampoo										
3. Meat										
4. Car										
5. Book										
6. Movie										
7. Coffee										
8. Kitchen appliance										
9. Insecticide										
TOTAL										

4

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

SERVICE

PREFACE

An agricultural business requires many services to help keep things operating smoothly. Because of high costs it is impossible for each farm to employ specialists in each and every field. Therefore, businesses are established to serve a large number of farmers. These services can vary from the veterinarian and artificial inseminator, to the soil tester, crop duster, and grain elevator operator. As in the supplies occupations, these occupations tend to be regional and specialized.

Work settings vary from experimenting in the laboratory to testing in the field or surveying from the air. In each instance individuals are helping their clients to consider alternative ways to reach production goals. The servicers must be able to give criticism without losing customers as well as take criticism which will improve the service or techniques used to provide the service.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual should learn how to give and take criticism.
2. An individual should consider alternative ways to reach a given goal.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Language Arts - Units on jouralism, speech, and writing technical reports.
2. Science - Units on animal health and plant development.

C. OCCUPATIONS

Veterinarian
Livestock marketing specialist
Agricultural farm advisor
Horse buyer or agent
Market reporter
Farm organization field servicer
Soil conservationist
Agricultural economist
Crop duster
Chicken sexer
Agricultural chemist
Exterminator
Ecological systems researcher
Odor-control agent
Sludge spreader
Waste compressor operator
Blacksmith
Cooperative extension service worker
Geneticist
Agri-marketing specialist
Custom farm equipment operator
Entomologist
Agronomist
Horse trainer

Artificial inseminator
Livestock sales organization manager
Foreign agricultural service
Broker
Farm appraiser
Soil scientist
Soil tester
Market supervisor
Agricultural statistician
Field hauler
Chemical applicator
Crop sprayer
Feed researcher
Environmental protection agency inspector
Animal waste recycling systems technician
Waste hauler
Farm manager
Grain elevator operator
Credit manager
Animal nutritionist
Seed analyst
Plant pathologist
Plant breeder
Plant taxonomist
Licensed horse shoer
Groomer

II. TEACHING STRATEGIES

A. GOALS

1. To experience giving and taking criticism in an adult manner.
2. To develop alternate plans for accomplishing career goals.
3. To explore occupations in AGRICULTURAL SERVICES.

B. INTRODUCTORY ACTIVITIES

1. Review the list of agricultural service occupations. Identify the types of services each would provide the farmer.
2. Discuss situations when criticisms would be given. Role play these situations showing various ways of giving the criticisms and ways of reacting to the criticisms.
3. Discuss alternate ways of accomplishing career goals; work then study, work and study, study then work.
4. Ask students to react to the following criticisms, stating how each one should be re-stated, and how the recipient might react to the original criticism and to the re-stated criticism.
    a. What weird shoes you are wearing today.
    b. This English these has too many punctuation errors.
    c. This feed mixture will do a better job for your pigs than the one you are presently using.
    d. Brand x seeds are terrible.
    e. You are doing it all wrong. Let me show you how to do it.
5. Have the county agricultural agent visit the class to discuss the ways this agency assists the farmer in making decisions regarding the purchase and use of supplies. Ask for a demonstration of soil testing.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Interview a veterinarian. Discuss how the veterinarian developed the skills, aptitudes, and training required for this occupation.
2. Visit a realtor who specialized in farm real estate. Find out how the properties are appraised and the kinds of skills needed to sell farm property.
3. Visit your local bank and talk to the farm manager. Find out the competencies needed to manage a farm.
4. Research the job of crop duster or seeder. What are the skills, responsibilities, and risks related to this job? Relate why this method is used instead of more conventional methods. Find out if this is regional and/or used only for specific crops.
5. Prepare a report on how types of plowing, feedlots, grazing of animals, harvesting, and use of fertilizers and chemicals are related to the environment.
6. Select an occupation which is unfamiliar to you from among those listed under "Instructional Information". Prepare a poster describing the skills and knowledge needed to develop competencies in that occupation.

7. Interview an entomologist. Find out what services are provided to farmers, where research is conducted, and what problems are anticipated for the future.
8. Prepare an information booklet on one or more of the following: chemicals, fertilizers, seeds, insects, plant diseases, animal diseases.
9. Listen to the farm market report. Make a list of terms used and define them. Select a plant or animal crop and record the selling price each day. Does this information affect the farmer? How?
10. Prepare a display of soil from different parts of your neighborhood or community. Identify plants growing in that soil and the condition of those plants.
11. Visit your local exterminator. Find out the hazards of this job and the special knowledge required to do the job, yet protect the environment. How has this industry reacted to the criticism received from environmentalists?

5

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

MECHANICS

PREFACE

Do you like to make machines operable? Can you work under pressure of time? Do you see beauty in a combine, corn picker or grain elevator? Then perhaps you are interested in making, adjusting and/or repairing agricultural machinery and equipment.

As in most machinery sales and services businesses, when the customer is shut down assistance is needed right away. Perhaps you will be the one to invent the new machine which harvests or plants a crop faster and more economically. If you are interested in soil and water management, watershed and soil bank management may be in your future.

Perhaps your inclination is in design. Agribusiness can put you to work designing equipment and buildings, and developing systems for cooling, heating,and watering. A knowledge of the farmers' problems will help you to help them improve their businesses.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Some skills can be transferred from one job to another.
2. Some occupations require skills using particular tools.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on machines
2. Math - Units on measurement
3. Art - Units on drawing of structures
4. Industrial Arts - Units on architectural drafting

C. OCCUPATIONS

- Agricultural equipment dealer
- Agricultural equipment parts manager
- Agricultural engineer
- Agricultural equipment inspector and tester
- Agricultural building specialist
- Designing engineer
- Agricultural building ventilation-insulation technician
- Soil surveyor
- Heavy equipment operator
- Soil service manager
- Rural power salesperson
- Automatic control systems servicer
- Ventilation systems servicer
- Farmstead structures designer
- Farm machinery servicer
- Agricultural equipment mechanic
- Agricultural equipment salesperson
- Agricultural equipment parts person
- Agricultural equipment set-up person
- Agricultural equipment operator
- Medication systems servicer
- Farmstead planner
- Farm building components salesperson
- Irrigation equipment operator
- Irrigation engineer
- Geologist
- Agricultural engineer
- Rural electrical safety technician
- Livestock equipment servicer
- Refrigeration systems servicer
- Farm machinery designer
- Lightning rod installer
- Silo-grain bin erector
- Agricultural equipment service manager

II. TEACHING STRATEGIES

A. GOALS

1. To identify basic skills which can be utilized in a variety of occupations.
2. To identify basic tools and equipment required by a person in mechanics.
3. To become familiar with occupations in AGRICULTURAL MECHANICS.

B. INTRODUCTORY ACTIVITIES

1. Show pictures of the different types of equipment and buildings which are needed by plant or animal producers. Identify skills that are used in their construction.
2. List some of the types of tools that are used to service the equipment and structures.
3. Visit the agricultural mechanic shop at the high school. See the various tools and identify those that students use.
4. Visit a farm implement dealer to investigate equipment, supplies,and services available to the farmer.
5. Invite high school students to demonstrate how a small gas engine is repaired.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a display of farm equipment.
2. Prepare a display of farm structures.
3. Prepare a diorama showing the changes in farm equipment from the 1700's to the present.
4. Select and give a demonstration on one of the following:
    a. operation of a simple machine
    b. operation of a gasoline engine
    c. operation of a windmill for water wells
    d. operation of an irrigation system
    e. use and installation of lightning rods
    f. design of a cattle or horse barn
    g. selection of tires for movable equipment
5. Survey an area. Give measurements and take soil samples, recording on the survey where each sample was taken. Show on the survey where the best soil is located.
6. Prepare a report on the different methods of conserving soil.
7. Develop the game show "What's My line?" Have the panelists identify the jobs of people in agricultural mechanics.
8. Prepare a chart of equipment used in plant and/or animal production. Include costs where available. (Farm magazines and dealers' brochures may be helpful.)
9. Draw a map of the United States. Indicate by crops the machines or structures unique to that particular production.
10. Prepare a set of drawings or models depicting agricultural buildings unique to particular types of farming which show how a chicken farmer's needs are different from a corn farmer's.

11. Write letters to companies specializing in farm buildings, equipment, and materials asking how buildings and equipment are designed to meet specific needs.
12. Obtain a plat book from the county agricultural extension office. Identify some land markers in your area.
13. Prepare a demonstration on soil erosion.
14. Visit a farm that uses an irrigation system. Compare its system with other types of systems.
15. Prepare a chart showing the many ways electricity helps the farmer. In view of an energy crisis point out some ways electricity can be conserved.
16. Prepare a television newscast entitled "All Electrical Power to be Shut Off--What Will The Farmer Do?" Include problems to be solved and possible solutions.
17. Diagram and wire a single pole switch and light circuit.
18. Visit a farm equipment dealer and interview the mechanics. Identify skills which can be transferred to other types of mechanic's jobs such as auto mechanics.
19. Visit the High School "Small Engines" class. Find out where the students plan to use their skills and whether any of the skills are unique to Agricultural Mechanics.
20. Visit a construction company that erects farm structures. Discuss the specialized needs of the agricultural producer.

6

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

PRODUCTS (PROCESSING ETC.)
(DAIRY, MEAT, FRUITS, VEGETABLES, NUTS, FIBERS AND OTHER PRODUCTS)

PREFACE

The location of the bulk of the processing industry in or close to production areas highlights the fact that food processing is essentially an agricultural industry. By preserving the farmer's perishable crops through canning, freezing, and dehydrating, the processing industry has eliminated the waste that would otherwise result from seasonal gluts and has made perishable products available to the consumer year-round.

The principal dairy processing activities may be divided according to three general types of dairy plants. One type deals primarily with fluid milk and some fluid milk by-products. The second type of plant makes ice cream or ice cream mix. The third type manufactures butter, cheese, nonfat dry milk, condensed milk, or other products.

The principal activities in meat processing deal with slaughtering poultry, fish, and livestock; dressing, curing, processing, packaging, and canning meat; storing meat and meat products; and distributing and selling meat and meat products.

The principal activities of fruit, vegetable, and nut processing deal with washing, inspecting, and trimming peel in processing and distributing.

The principal activities in raw material processing deal with treating such materials as cotton, tobacco, wool, furs, or grain which are then sold to manufacturers to be made into a variety of finished products.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Different skills are required for different tasks.
2. An individual can differentiate between oneself and others in terms of interests, aptitudes, values and achievements in and out of school.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on food preservation.
2. Home Economics - Units on food preservation.

C. OCCUPATIONS

Milk sampler
Batch freezer
Dairy-plant engineer
Dairy technologist
Butter maker
Offal person
Meat inspector
Beef boner
Final-dressing inspector
Poultry dresser
Food products washer
Redrying machine operator (tobacco)
Sorter
Nut roaster
Freezer person
Drier (yeast)
Wheat cleaner
Ripening room manager
Specialty food processor
Refining supervisor (sugars)
Wool buyer
Clarifier
Dairy-processing equipment operator
Dairy tester
Cheese maker
Cured-meat packing supervisor
Butcher
Meat grader
Animal eviscerator
Fish butcher
Blancher operator
Fruit-packaging and grader operator
Cannery worker
Peanut butter maker
Rice miller
Gelatin plant supervisor
Maple syrup products supervisor
Miller
Egg processing plant manager

II. TEACHING STRATEGIES

A. GOALS

1. To identify the relationship of basic skills in math, reading, writing, speaking etc., to occupational success.
2. To identify basic interpersonal skills required for career success.
3. To differentiate oneself from others in terms of interests, aptitudes,and achievements in and out of school.
4. To explore occupations in PROCESSING AGRICULTURAL PRODUCTS.

B. INTRODUCTORY ACTIVITIES

1. Prepare two lists of interests, aptitudes,and achievements, one titled, "In School" and one titled, "Out of School". Discuss relationships to each other, to career goals,and to peers. List three interests, aptitudes,or achievements that are similar to classmates and three that are unique. Write a short paragraph on how these likes and differences affect your relationships with your peers.
2. Discuss with the class the occupational tasks which use math skills. Include geometry and algebra as well as basic adding, subtracting and percent.
3. Discuss the different types of reading and writing skills for different types and levels of occupations.
4. Discuss instances where writing and speaking skills are necessary and where interpretations are important.
5. Discuss oral communications skills in the frame work of an employer--employee relationship.
6. Place a carton of milk, a linen napkin, a box of cake mix, a can of Spam, a can of beans, and a package of nuts on the table. Discuss how the items got there. Discuss how the habits of workers affect the quality and price of products. Identify the basic math, reading,and writing skills needed by workers processing agricultural products.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Trace the route of a quart of milk from the cow to the home refrigerator. Identify some of the occupations involved in processing this product. Identify the level of training required for each.
2. Identify the specialized skills required by dairy processors, such as milk or cheese testing.
3. Plan a cheese judging party. Prepare a list of criteria by which the cheese will be judged.
4. Prepare charts which identify the various cuts of meat on a carcass. Visit your local meat department to find out special skills a butcher needs.
5. Plan an "Orange Drink" judging party. Prepare orange drinks from fresh oranges, frozen concentrate, powders,canned juice, and soda pop. Taste for flavor, smell for aroma, record

nutrients and costs per servings. Rank items under each category. Identify occupations in the fruit industry.

6. Set up an assembly line to make peanut butter. You will need shellers, skinners, washers, driers, grinders, mixers, packers, suppliers, custodians, inspectors and supervisors.
7. Make a display of different brands of popcorn. Pop some for comparison of size, texture and taste. Who would gather this information in a business?
8. Display pictures of several ways meat is processed and packaged, e.g., frozen, canned, fresh, smoked. For each picture prepare statements as to why each method is chosen and the specific occupations required to perform the tasks.
9. Prepare a map of the United States showing where various foods are processed. Why are these plants regional? Would this work be seasonal? Why? Why do some people do seasonal work?
10. Prepare a report with pictures showing the processing of animal parts not used for human food e.g., hides, tail, and squeal. List occupations in those businesses.
11. Visit a canning factory to follow the processing of fruits or vegetables. Make a chart of the various jobs found in the factory.
12. Prepare a chart showing several ways of preserving plant foods. Identify occupations and work setting for each.
13. Prepare a display of either a fruit or vegetable which has been processed in three different ways, e.g., canned, frozen, dried. Identify work settings and occupations for each.
14. Prepare a display showing the processing of fiber from field to yard goods. Identify occupations and work settings.
15. Prepare a report on furs. Use samples to illustrate the different ways of raising or obtaining the furs and identify ways of processing the hides.
16. Prepare a collage of the many products containing soybeans.
17. Prepare a report on making potato chips. Identify unique occupations.
18. List food products processing occupations which would require the refinement of taste, smell, visual or feeling skills.

7

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

ORNAMENTAL HORTICULTURE

PREFACE

Ornamental horticulture deals with the culture, production,and maintenance of plants; the establishment maintenance,and management of ornamental horticulture enterprises; the principles and practices involved in locating, planting,and maintaining turf, plants and shrubs; and the selection and placement of living and non-living materials for the beautification of the indoor-outdoor environment.

What do you think when you see a nicely landscaped park or garden? Do you like to roll in a soft patch of green grass? Do you enjoy flowers in a window box or in a garden by the side of your house? Perhaps you like your plants inside the house in hanging baskets or terrariums. Do you have a green thumb that really makes things grow? If you reacted positively to the above statements then perhaps you will be interested in careers that make for a greener world whether it be a rubber plant in an apartment house lobby or a park down the street.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Certain behaviors are appropriate to specific job settings.
2. Cost of training for occupations varies.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on plants.
2. Art - Units on design.

C. OCCUPATIONS

- Arboriculture
    - Arborist
    - Arboretum supervisor
    - Tree service department manager
    - Tree budder
    - Tree service proprietor
    - Tree remover
    - Tree surgeon helper
    - Tree surgeon
    - Park supvr.
    - Tree pruner
    - Tree girdler
    - Tree planter
    - Tree sprayer
    - Tree climber
- Floriculture
    - Florist (wholesaler)
    - Florist supply salesperson
    - Wedding consultant
    - Production manager
    - Florist (retailer)
    - Flower shop manager
    - Flower grower
    - Floral designer
- Greenhouse Operation and Management
    - Greenhouse employee
    - Plant propagator
    - Greenhouse manager
    - Transplanter
    - Plant pathologist
    - Plant geneticist
    - Plant potter
- Landscaping
    - Landscape drafter
    - Landscape maintenance supt.
    - Cemetery supt.
    - Park or parkway supt.
    - Landscape aide
    - Landscape architect
    - Landscape contractor
    - Landscape gardener
    - Landscape maintenance supvr.
    - Landscape consultant
- Nursery Operation and Management
    - Nursery salesperson
    - General manager--nursery
    - Nursery stock jobber
    - Nursery grower
    - Nursery production manager
    - Nursery supvr.
    - Nursery sales agent
    - Nursery worker
    - Transplanter
- Turf Management
    - Golf course supt.
    - Grounds supt.
    - Golf course installation supvr.
    - Turf grass maintenance worker
    - Fumigator
    - Pest control specialist
    - Turf production manager
    - Turf research and development technician
    - Sodlayer
    - Greenskeeper

II. TEACHING STRATEGIES

A. GOALS

1. To understand how work settings determine behaviors.
2. To become aware that occupational training costs vary.
3. To explore occupations in ORNAMENTAL HORTICULTURE.

B. INTRODUCTORY ACTIVITIES

1. Take a trip to a nursery. Interview workers to determine:
    a. Whether their behaviors are different:
        (1) working in the fields
        (2) showing merchandise
        (3) giving advice
        (4) planting for customers
    b. Kinds of training required
    c. Work settings and conditions
    d. How they decided to pursue a career in ornamental horticulture
2. Distribute catalogs from vocational schools, private schools, junior colleges, four-year colleges, and universities. Compare tuition and board and room costs or commuter costs. Prepare three individual plans for career choices and the level of training required. One plan should show the most expensive and one the least. Identify the major realistic reasons as to why one plan might be selected over the other.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Make a list of the businesses in your community which are a part of the ornamental horticulture cluster, e.g., arborist, florist, greenhouse worker, landscaper, nursery worker, golf course manager, or others.
2. Make a display of the tools unique to one of the above.
3. Give a demonstration in floral design.
4. Make a study of the plantings around your school. Make a diagram indicating ornamental plants and turf areas. Prepare a report on plant conditions including pruning needs and where grass needs to be seeded.
5. Visit a florist shop. Interview workers to find out where to go for training. Inquire as to behaviors used with customers in the shop or in their homes and with salespersons selling their products.
6. Prepare a poster to advertise times when customers would want to buy flowers.
7. Give a demonstration on making terrariums.
8. Prepare reports on the nature and care of special plants, e.g., plants for hanging baskets, etc.
9. Obtain soil from four different areas. Plant the same number of seeds of the same variety in each of the four media. Expose to the same conditions and record results.
10. Prepare a display on the propagation of plants.

11. Prepare a report on the use of scientific names for plants.
12. Develop a notebook of flowers, trees,or other plants found within a measured area.
13. Prepare a model of a house or apartment building on an empty lot. Demonstrate how the addition of trees, grass, shrubbery, and gardens will beautify the setting.
14. Prepare a portfolio of drawings for landscaping around a building. Include plants, fences, ornamental decorations,and pools.
15. Tour the school grounds with the groundskeeper and list the tasks involved in caring for the turf and plants.
16. Measure your school grass area and determine the number of square feet of sod it would require to sod the area. Contact a sod grower for costs and labor and figure the cost and hours of labor to do the job.
17. Visit a golf course and see the different types of grasses that are planted. Interview the greenskeeper as to the skills, knowledge and training for the job.
18. Prepare a report on artificial turf. Are there special skills required in caring for it?
19. Describe an ornamental horticulture occupation in terms of work settings and behaviors appropriate to each setting.
20. Prepare two plans for receiving training for a particular career which show significant differences in cost.

8

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

RENEWABLE NATURAL RESOURCES

PREFACE

How much do you care about what happens ten or twenty years from now? Will it make a difference if you do care? Conservationists and ecologists say yes. If you are truly concerned you may be interested in the agricultural resources which are capable of reproducing or replenishing themselves. The occupations in this study are involved in the conservation and management of these resources for the economic and recreational benefit of humankind.

The renewable resources include forest, soil, wildlife, water, fish, and range. The principal activities in forestry are forest maintenance, reforestation, insect and disease control, and fire prevention. Activities related to soil are prevention of soil erosion, soil rehabilitation, land use,and land measurement. Activities related to wildlife include studying and providing information on migrations, habitats and propagating game. Activities related to water include the control, purification, transportation,and conservation of urban and rural water supplies. The principal activities related to fish are breeding and stocking fish, regulating fish populations,and controlling disease.

How people care for the natural resources will determine how long humans will be able to survive on this planet as the interdependent cycle of life depends on all elements and the eradication of one has a pronounced effect on others.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Problems which conflict with one's goals can be identified and assessed.
2. A person's membership in a group affects the group as well as self.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Unit on earth science.
2. Social Studies - Unit on conservation of resources.
3. Mathematics - Unit on ratio and proportion.

C. OCCUPATIONS

Forestry
- Forestry survey aide
- Forestry researcher
- Tree nursery management assistant
- Land manager
- Forest genealogist
- Fire lookout
- Fire patroller
- Forest fire fighter
- Zoologist
- Timber stand improvement supervisor
- Forest fire control technician
- Park naturalist
- Forest ecologist
- Forest inspector
- Fire warden
- Firetower operator
- Sprayer
- Tree planter

Soil
- Soil scientist
- Gardener or caretaker
- Soil conservationist
- Soil conservation civil engineer
- Agronomist
- Grounds superintendent
- Soil conservation agricultural engineer

Wildlife
- Game bird breeder
- Game biologist
- Wildlife aide
- Natural history curator
- Wildlife biologist
- Taxidermist
- Gamekeeper
- Game farm worker
- Government trapper or hunter
- Wildlife and conservation research aide
- Game (warden) protector
- Refuge manager
- Aviary manager

Fish
- Fish biologist
- Lake manager
- Fishery supervisor
- Fish detection technician
- Fish farm helper
- Laboratory technician-ocean fishing
- Fishing instructor
- Live bait dealer
- Fish management specialist
- Fish hatchery manager
- Fish processor
- Food fisheries technician
- Seiner biologist
- Fish warden
- Fish farmer

Range
- Range manager
- Range conservationist
- Range technician
- Conservation aide

II. TEACHING STRATEGIES

A. GOALS

1. To identify potential problems which could interfere with attainment of a career goal.
2. To identify how one's membership in a group will affect the group as well as oneself.
3. To explore careers in RENEWABLE NATURAL RESOURCES.

B. INTRODUCTORY ACTIVITIES

1. Discuss with the class the natural resources which basically renew themselves or can be made productive, e.g., forests, soil, wildlife, water, fish, and range. List under each category occupations that would be connected to those resources.
2. Discuss the environmental movement and how it has caused friction with businesses. Discuss whether the movement will actually improve business and protect the earth. Discuss how the actions of members of conservation and non-conservation groups affect themselves and others. What kinds of problems or conflict do they have?
3. Discuss goals set by conservation groups, industry, and fisheries. What are some of the conflicts? How can they be resolved?
4. List problems which could be encountered in pursuing a career. Have each individual rate each problem as big or small as that individual sees it. Discuss means available to solve those problems. (See supplement at end of unit)
5. Divide the class into five groups to study the renewable natural resources. Emphasize observing conflicts with one's own goals and the goals of a group and the effects of membership in a group as to concern for the renewal of natural resources.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

Forests:

1. Make a survey of trees in the neighborhood. Identify those which should be left to grow if they were in a forest to be harvested as lumber. Which would be left to grow if in a recreational area? What percentage of the trees would be good for lumber? Which should be left to grow in a nature area?
2. Measure the girth of the tree trunk to determine its age. Estimate its height.
3. Identify diseases and insects which create problems for each tree variety in your neighborhood.
4. Identify ornamental trees used in your neighborhood. Determine the purpose for each type of planting.
5. Visit a park area. Identify trees grown there and their purpose.
6. Prepare a report on how forests are protected and how people are involved in protecting and renewing the forests.

7. Discuss with the high school agriculture teacher the forest management program. If the class has a tract of forest land arrange to accompany the class and identify the competencies being developed and the problems they try to solve. Report your findings to your class.

Soil: (including range land)

1. Collect soil samples in your community. Record exactly where each sample was taken. Record what vegetation was grown in the soil.
2. Depict the importance of the soil by tracing the origin of items used every day, e.g.,

   Candy Bar: store - factory - wrapper - factory -
   - trees - soil; cocoa - factory -
   - trees - soil; butter - factory -
   - cows - feed - soil; sugar - factory -
   - canes - soil.

   Shoes: Store - factory - leather - tannery -
   - slaughter house - feed lot - cow -
   - plants - soil
3. Visit a lawn and garden supplier and find out ways the soil can be made more productive.
4. Interview the high school agriculture instructor or the agriculture extension agent and borrow a soil testing kit to test samples collected in activity #1.
5. Prepare a map showing range lands. Identify products of this land. How would the lifestyle of workers on range land be different from other types of occupations?
6. Prepare a report on how soil is protected and how people are involved in protecting and renewing the soil.

Water:

1. Prepare a map of your area and locate the following:
   a. Water reservoirs
   b. Water storage towers
   c. Water treatment plants
   d. Waste water treatment plants
   e. Large demand water users
2. Trace the history of water in your area: Average yearly rainfall for 50 years; size and locations of streams and rivers; flood areas; and/or height of water table.
3. Visit the water treatment plant. Observe skills needed to purify water for human consumption.
4. Research any plans in your state for problems encountered in controlling water, e.g., dams and cloud seeding. How do the needs of one person affect the needs of others?
5. Prepare a report on the whys and hows of protecting the water in your community. Include ways technology has caused problems and ways technology can eliminate problems.

6. Defend or attack the idea that people and industries housed along a river should be allowed to use the water for whatever purpose they desire. Conclude with a hypothesis as to how your membership in a group for individual rights or a group concerned with group rights will affect the group as well as yourself.

Fish:

1. Prepare a chart of the fish found in your area. Identify those that are sold commercially. What occupations are involved in the fishing businesses?
2. Prepare a report on fish farming. How is this type of farming different from other types of farming? Are there different problems and conflicts?
3. Report on the different ways of harvesting and processing fish.
4. Prepare a mural showing the various occupations related to the fishing industry.
5. Prepare a report on how and why fish are protected. Include the people who are involved in protecting and propagating fish.
6. Prepare a display of local game fish. Identify the different methods of fishing for each variety.
7. Interview a person who sells bait to the fishers. Identify knowledge needed to advise others in making their purchases.

Wildlife:

1. Conduct a neighborhood wildlife survey. Categorize the wildlife into "helpful" and "harmful" groupings. Prepare a report giving the number of each kind of animal in percentages of the total numbers.
2. Visit a taxidermist.
3. Invite the game warden to visit your class. Discuss the need for wildlife protection and how these rules affect citizens. Also discuss how groups with special projects can and do affect the desires of other people.
4. Prepare a report on how humankind has destroyed the habitats of wild animals. Describe some techniques used to encourage the desirable animals to return to the area.
5. Prepare a report on how wildlife is protected and how people are involved in protecting and propagating wildlife.
6. Prepare a report on how conservationists have improved the habitat of the deer or wild turkey, both of which have increased in numbers in the past fifty years. (Write to the Pennsylvania State Game Commission, Harrisburg, Pennsylvania for information on this remarkable feat.)

Activity B-4

JUMPING CAREER HURDLES

PROBLEM	SIZE		SOLUTIONS
	BIG	SMALL	
1. Career Choice			
2. Work Experiences a. within the work setting of the chosen career. b. within other work settings			
3. Education and/or training			
4. Finances			
5. Availability of jobs			

9

OCCUPATIONAL CLUSTER
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

FORESTRY

PREFACE

Do you like to tramp through the forests, spend your vacation or every free weekend there? Are you interested in how forest products are used and in ways of managing a timber stand? If so, perhaps a career in forestry is for you. The federal government and state agencies are major employers of forestry personnel. In recent years funds have not kept pace with the need for qualified employees, with the result that fewer persons are employed. Some areas of private industry, city, and county governments can provide many new opportunities in forestry. Of these three agencies, the private sector offers the greatest potential in Illinois.

Forestry is a profession for scientific management of forests, forest lands, and their products, which insures continuous production of goods and services. The occupations in this study are concerned with managing and utilizing timber resources, providing facilities for recreation, managing grazing lands, developing homes for wildlife, safeguarding water supplies, reproducing, protecting and improving forests, and researching methods of keeping the land productive.

I. INSTRUCTION INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual's interests, aptitudes, values and achievements are not always the same as those of peers.
2. Educational skills and experiences are related to the achievement of career goals.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Unit on trees.
2. Industrial Arts - Unit on woods.

C. OCCUPATIONS

Logger
Timber stand improvement supervisor
Logging operations inspector
Pulp buyer
Timber market estimator
Loader operator
Chipper operator
Crawler driver
Resaw operator
Christmas tree farmer
Timber cruiser
Forest fire control technician
Entomologist
Forest technician
Forest ranger
Pulp buyer
Warehouse superintendent
Mill superintendent
Dry kiln supervisor
Broker
Crane operator
Grader
Operator
Gum grader
Maple syrup maker
Greenspicker
Moss cutter
Moss picker
Turpentine gatherer
District forest superintendent
Woods supervisor
Logging supervisor
Surveyor
Log contractor
Log scaler
Timber manager
Gang sawyer
Ranger weigher
Skidway person
Crane operator
Chokerperson
Sawmill buyer
Fire guard
Treating technician
Biologist aide
Forest specialist
Forest aide
Log and pulp scaler
Wood procurement superintendent
Wood marketing supervisor
Quality controller
Veneer operator
Checker-scaler
Debarker
Gum gatherer
Sugar tapper
Sap collector
Greenstier
Moss handler
Resin gatherer
Lumber inspector and/or grader

II. TEACHING STRATEGIES

A. GOALS

1. To understand that an individual's interests, aptitudes, values and achievements are not always the same as those of one's peers.
2. To identify how educational skills and experiences are related to the achievement of career goals.
3. To explore occupations in FORESTRY.

B. INTRODUCTORY ACTIVITIES

1. Hand out dittoed sheets with the following columns: Interests, aptitudes (talents), values, achievements, educational skills and educational experiences. Have each student fill in a sheet. Discuss the variety of responses in each area. Have students suggest appropriate careers.
2. Make a list of items made from wood. Identify some items which are also produced in other materials such as plastic or steel. Discuss how people's values determine whether they would purchase a wooden desk or a steel desk. Continue discussion with other items.
3. Brainstorm the various occupations in forestry. Identify the same qualities as in activity #1 for people in this field. Contrast this area with other career areas.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a survey of kinds of trees in your neighborhood. If these trees were growing in a forest and harvested how would each variety be used?
2. Prepare a demonstration on how to estimate the number of board feet of lumber in a tree by using a biltmore stick and a hypsometer.
3. Exhibit samples of different kinds of wood, label with name and primary use.
4. Report how one manages a forest. Identify a climax forest.
5. Write an essay or poem illustrating the importance of trees to the community; e.g., what is meant by the saying that "Some trees are worth twenty air conditioners"?
6. Prepare an illustration of forest enemies. Describe their mode of destruction.
7. Find out why fighting forest fires is a very technical job.
8. Write a story about a "World Without Paper".
9. Make a product map showing where various varieties of trees are harvested.
10. Lead a panel discussion on the importance of ecology and/or environmental protection in forestry.
11. Report on how the sap, sawdust, roots or chips of trees are used.
12. Develop a cross word puzzle using words appropriate to forestry occupations.

13. List the interests, aptitudes, and values that would be appropriate for a person considering a career in forestry. Compare those attributes with one's personal career choice.
14. Identify educational experiences which develop interests, aptitudes, and values for any career.
15. Visit a sawmill or lumber yard. Identify products from local forests.
16. Visit a Christmas tree farmer. Discuss how the farmer decided to choose this occupation.

OCCUPATIONAL CLUSTER

"B"

BUSINESS MARKETING AND MANAGEMENT

TABLE OF CONTENTS

Business, Marketing and Management Occupations Units

1. Clerical-Bookkeeping/Accounting-Secretarial 109

2. Electronic Data Processing 115

3. Promotion and Marketing Research 119

4. Purchasing and Sales 123

5. Distribution (Transportation, Storage and Stock Control)..... 127

6. Top Management 131

7. Personnel Management 137

8. Production Management 141

9. Finance, Credit, and Insurance 145

1

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

CLERICAL-BOOKKEEPING/ACCOUNTING-SECRETARIAL

PREFACE

According to the Occupational Outlook Handbook, about fifteen million people worked in clerical-bookkeeping/accounting-secretarial occupations in 1974. This number is expected to increase faster than the average for all occupations into the 1980's. Advancement opportunities are good for workers who get additional formal training and/or who demonstrate capability on the job. Most employers prefer that an applicant have basic typing skills,an aptitude for detailed work, and skills in grammer, spelling, and arithmetic.

The impact of automation of these occupations is greater in some areas than in others. Prospects for long-term employment are better for those jobs that are less likely to be affected by automation, or those which have grown out of recent technological advances such as the computer. Availability of jobs for secretaries, receptionists,and typists is expected to continue to be good, particularly in banking, insurance, manufacturing, and professional service. Opportunities for temporary or part-time work are expected to be good for persons with secretarial, typing and clerical, skills.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. There are characteristics which differentiate between occupations, both within and between job families.
2. Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Language Arts - Units on listening, observing, speaking, reading, writing,and problem solving for effective communication skills.
2. Mathematics - Units on basic mathematical operations related to bookkeeping.
3. Social Studies - Units on interpersonal relationships.

C. OCCUPATIONS

Clerical
- Duplicating machine operator
- General office clerk
- Statistical clerk
- Typesetter perforator
- Typist
- Typing section chief
- Flight crew time clerk
- Calculating machine operator
- File clerk
- Records custodian
- Posting clerk
- Information clerk
- Photo-composing machine operator
- Cashier
- Receptionist
- Real estate clerk
- Chief telephone operator
- Messenger
- Registration clerk
- Records clerk
- Control clerk, auditing
- Actuarial clerk
- Bookkeeper
- Shipping and receiving clerk
- Payroll clerk
- Audit clerk
- Aircraft log clerk
- Mail-preparing and mail-handling operators
- Cancellation clerk
- Accounting clerk
- Classified ad clerk
- Transcribing machine operator
- Telephone operator
- Postal clerk
- Proofreader I
- Telephone answering service operator
- Lost and found clerk

Secretarial
- Stenographer
- Stenographic pool supervisor
- Word processing supervisor
- Court reporter
- Stenotype operator
- Social secretary
- Secretary
- Correspondence secretary
- Executive secretary
- Medical secretary
- Legal secretary
- Administrative support person

II. TEACHING STRATEGIES

A. GOALS

1. To identify ways in which occupations differ, both within and between job families.
2. To identify certain expectations common to most occupations.
3. To explore CLERICAL-BOOKKEEPING/ACCOUNTING-SECRETARIAL occupations.

B. INTRODUCTORY ACTIVITIES

1. List on the chalkboard the clerical-bookkeeping/accounting-secretarial occupations and identify as many different places as possible where jobs would be found. Identify skills needed and machines and tools related to each.
2. Borrow a time-clock, if possible, or improvise, and have students punch the time-clock, or check in and out of class each day as an employee on a job would. Discuss the purpose of recording time. Devise problems for computing pay for weekly, bi-weekly, and monthly pay periods.
3. Arrange for the class to visit the high school business department to observe high school students demonstrating the skills they are learning. Ask about courses available. (Use the supplement at the end of this unit to gather information for this cluster and others.)
4. Ask the school secretary, well in advance, to save some "junk" mail for the class. Show the class the stack of mail, assume that it is important, and ask how a file clerk would know how to locate a given piece. Have volunteers sort and file the business correspondence for activity C-5.
5. Arrange with the school secretary, or with local businesses to have the class assist with mass mailings, folding enclosures and labeling, stuffing, and sealing envelopes. Help the class determine the most efficient ways of performing these tasks.
6. Invite the personnel manager of a local business (or the person who does the hiring) or a representative of the Chamber of Commerce (or similar organization) to visit the class. Ask that person to describe the kinds of clerical-bookkeeping/accounting-secretarial jobs available in the business or community, the job duties, training and experience needed, income and fringe benefits, outlook for the future of those jobs, similarities and differences in related jobs, and personal qualities needed, such as punctuality, dependability, ability to take directions, and initiative.
7. Conduct a class experiment in listening. Role play a word processing supervisor who is instructing a group of newly employed correspondence secretaries. Tell the new employees the company regulations about punctuality, absenteeism, courtesy, coffeebreaks, length of lunch time, etc. Include those things that will help the new employees to be successful. Then ask the class to list, very briefly, the things you mentioned, and exchange the lists. Count the number of

correct items on each list. Discuss the number of responses. Discuss why employees are expected to remember and observe regulations.

8. Prepare with students' help a record of a teenager's income and expenditures for three months. Set up a small notebook as an account book. (See sample account sheet at end of unit.) Have the students estimate the costs and make a projection of similar expenditures one year from now. Then prepare an accountant's report on the projected financial needs and means for securing additional funds. Identify in the report the factors that may affect the projected costs.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Choose one of the clerical-bookkeeping/accounting-secretarial occupations identified in activity B-1. List a number of widely differing places in which that one occupation might occur. Choose one of those places of employment and research the basic job skills needed for that occupation, how they are acquired, and additional training needed for that specific place of employment, e.g., a secretary in a hospital needs background in science, medicine, and health in addition to the basic skills of typing, shorthand, filing, etc.
2. Prepare and present a dramatization of information clerks on duty for an airline and for a college. Make up situations in which a customer or visitor needs information and show how the clerk handles the situations both when the clerk knows and does not know the answers.
3. Devise a filing system for the stack of mail the teacher has. Explain the system to the class. Make a list of the items that go into the file. Then have someone select at random items from the list and see if you can locate those items in the file.
4. Ask the librarian if you may assist with filing catalog cards for new materials, or with other clerical-bookkeeping/accounting-secretarial tasks.
5. Devise a filing system for the materials you put into your personnel file. Will they be filed chronologically, or alphabetically by units or topics? Decide how you can most quickly locate things in your file when you want them. (To be used by students who have had the initial Introductory Unit at the beginning of the Curriculum Guide.)
6. Make plans to get a part-time clerical-bookkeeping/accounting-secretarial job when you are in high school. List the skills you will need on the job. Study the high school handbook and list the courses you may take to learn those skills. Find out where the jobs are. Visit the nearest state employment office for information.
7. Prepare a bulletin board display of help wanted ads for jobs identified in this unit.
8. Plan and present a slide presentation showing workers on these jobs at work in local places of employment.

9. Talk to a high school student who is working part time in one of these jobs. If that student is willing to tell you, ask how much the job pays, where the job is, what the duties are, what the chances are for advancement and a full-time job. Talk to other students who are working. Make a card file of their occupations--duties, earnings, skills needed, etc.
10. Plan to serve as a receptionist in the school office. Talk with the school receptionist or secretary about the duties you will perform--answering the telephone and greeting visitors. Plan with the principal or teacher to select a day when many visitors are expected, such as an open house, or parent-teacher conference day so that you are assured of having visitors to greet.
11. Visit your local telephone company. Borrow any audiovisual materials available that you can show to the class. Ask for materials that show telephone company employees in a variety of jobs.
12. Plan to observe, and if possible, assist a registration clerk in a hotel for three to four hours during a busy part of the day. What does the registration clerk do when guests are not arriving or checking out?

Activity B-8

Sample Account Form

	Income		Expenditures		Balance
Date	Source	Amount	Item	Amount	3.48
March 1	Allowance	40.00			43.48
March 1-31			Lunch (23 days @.75 ea.)	17.25	26.23
March 3			Shirt	6.47	19.76
March 3			Coke	.15	19.61
March 5			Movie	1.50	18.11
March 6			Notebook paper	.69	17.42
March 14			Movie, coke	1.65	15.77
March 19			Scarf	1.04	14.73
March 20			Jeans	11.47	3.26
March 27			Potato chips for party	.64	2.62
March					
Totals	Income	40.00	Expenditures	40.86	2.62
April 1	Allowance	40.00			42.62
April 1-30			Lunch (20 days @.75 ea.)	15.00	27.62
April 4	Babysitting	3.00			30.62

Activity B-3

High School Courses Available for Preparation in:

Applied Biology and Agricultural Occupations	Business, Marketing, and Management Occupations	Health Occupations	Industrial Occupations	Personal and Public Services Occupations

2

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

ELECTRONIC DATA PROCESSING

PREFACE

How often have you heard someone blame a computer for an incorrect bill, for a mix-up in school schedules, for a mistake on a report card?

Computers range from fairly simple to very complex, sophisticated machines which are capable of numerous operations. However, without human programming and input, the machines are useless.

How do you feel when you think of feeding information into a machine, waiting for that machine to follow your directions, and then seeing the results? For instance, a doctor may give information to a computer operator to feed into the machine. Using stored information, the machine makes calculations and issues a printout which may give the doctor a diagnosis and method of treatment for a patient. Banks, credit card companies, insurance companies, large retail merchandising firms, and government are among the largest users. Since 1951, when the first computer was installed for commercial use, computer systems have become an increasingly important part of everyday life.

Changes in data processing technology will have differing effects on computer operating occupations. Some will decline and some will expand. Therefore it will be important for workers to be able to transfer and/or develop new skills for the operation of improved or new equipment.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Most occupations require a beginning skill competency.
2. Career development includes progression through stages of educational and occupational training.

B. SUBJECT MATTER AREA

1. Mathematics - Units on basic fundamentals and logical thinking.
2. Science - Units on physical sciences.
3. Social Studies - Units on economics.

C. OCCUPATIONS

Director business data processing
Data Input, Output Operator (Keypunch operator)
Coding and peripheral equipment operator
Digital computer operator
Tabulating machine operator
Manger electronic data processing
Computer and console operator
Data typist
Computer programmer
Systems analyst
Verifier operator
Sorting machine operator
Control clerk, data processing I
High speed printer operator

II. TEACHING STRATEGIES

A. GOALS

1. To identify the basic skills needed for entry into the world of work in general and into the electronic data processing field in particular.
2. To explain ways in which additional skills and knowledge are acquired for advancement in the world of work in general and in electronic data processing in particular.
3. To explore careers in ELECTRONIC DATA PROCESSING.

B. INTRODUCTORY ACTIVITIES

1. Invite the manager of an electronic data processing department or business, a computer programmer, or a computer operator to visit the class. Ask that person to bring a keypunch card for each student, explain the code, and have students code a message, exchange cards, and decode the message. Then discuss a variety of jobs in this area, ranging from those requiring minimal training and experience to those requiring extensive education and experience. List on a chalkboard as many occupations as possible in Electronic Data Processing. Duplicate the list for later use.
2. Show a filmstrip or movie on Electronic Data Processing, or slides of local persons at work in Electronic Data Processing occupations.
3. Discuss "flow charting" with the class. Demonstrate by describing each action the teacher takes to write on the chalkboard, e.g., (1) lay down the object (pen, pencil, paper) the teacher is holding, (2) push chair back from desk, (3) rise from chair, (4) turn to (left or right), (5) take ___ steps to the chalkboard, (6) pick up eraser, (7) erase a space, (8) put down eraser, (9) pick up chalk, (10) start writing. Compare this activity with the work of a computer programmer.
4. Have students move into small groups. Ask each group to select a simple activity, e.g., opening a book to a given page, and write a flow chart for it. Have class reconvene and ask for volunteers to follow flow charts written by groups in which they did not participate. Evaluate how the volunteers performed the activity using only the written flow chart. Discuss problems in flow charting.
5. Visit an electronic data processing center. Plan with students ahead of time what they will observe and questions to ask. List the types of information the center handles, how the information is processed, and plans for future use by the business. If possible, allow students to operate some of the equipment and see the results.
6. Divide into four groups based on the amount of education required to obtain occupations in this unit: High school, specialized on-job, community college, or college graduation. From the list previously developed by the class, select those

occupations requiring the amount of education fitting each group. Try to find additional occupations to add to the list. Each member of the group then choses one occupation to research and report on to the group. The group may decide how to present a report to the whole class on the learnings from this activity.

7. Discuss the basic skills needed for entry into any job--mathematics, communications, science,and social studies in particular. Relate these skills to occupations in this unit. Discuss how the further development of skills changes the level of occupation for which one is prepared.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Write a flow chart for getting up in the morning and getting to school on time.
2. Assume that you are employed as a keypunch operator. Your employer has ordered a new piece of equipment that may make your job obsolete. What are you going to do about it? Hang on as long as you can, and then try to find another company that does not have newer equipment? Go on welfare? Prepare yourself to operate the new equipment? Choose a new occupation and prepare for that? What other choices do you have? Make a decision and describe the steps you would take to implement that decision.
3. Identify in small group discussions those learnings in the various classes you have that will be useful to a worker in an electronic data processing occupation. You may categorize your findings under headings such as: specific job skills, attitudes toward work, interpersonal relationships, or others. Prepare a poster to display the information you have gathered for the class.
4. Prepare a report on how computers will be used when your grandchild is an adult. You may choose the form you want your report to take.
5. Choose a math problem that is easy for you, and write a step-by-step solution for the problem. Then choose a math problem that is difficult and write a flow chart for solving that problem. Check with your teacher to be sure the flow chart is correct. Then follow the flow chart to solve the problem. Does the chart help?
6. Assume that you want to be a coding and peripheral equipment operator or a computer programmer. Look up information on both of these occupations. Then talk to your school counselor about them in relation to yourself. Choose one and outline the courses you will take in high school to prepare for it. Share with the class the steps that you follow in doing this activity.

3

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

PROMOTION AND MARKETING RESEARCH

PREFACE

Recall the last tube of toothpaste you or someone in your family bought. Why did you buy that particular brand? What kind of work went into influencing you? A research director supervised the collecting of information about all kinds of people, and what their likes and dislikes are. An account executive or an advertising manager used that information to make decisions about the kind of advertising to be used, how much money to spend on it, and what medium to use (television, radio, newspaper, magazine, billboard, telephone, mail). Copywriters wrote the text, gearing their approach to specific groups, such as adolescents or parents, for which they were writing. Artists and layout workers prepared drawings, designs, photographs, print type and size for the visual aids. A media director decided on the best buys for air time or advertising space, taking into account costs and the kind of audience to be reached. A production manager, with some assistants arranged for printing or filming of the ad and decided how to produce the best ad for the least cost.

The marketing/promotion field is competitive, creative and challenging. Ability to work well with other people as well as understanding people's wants will aid in successful employment in this area. The increased variety of goods and services that businesses and individuals will require is expected to stimulate a high level of marketing employment.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual's feelings and the feelings of others relate to commonly held beliefs and customs.
2. Economic trends can influence a career choice.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on economics and psychology.
2. Language Arts - Units on communication skills of reading, writing, speaking.
3. Mathematics - Units on computing costs.

C. OCCUPATIONS

- Copy writer
- Account executive
- Advertising manager
- Demonstrator
- Service person
- Advertising production manager
- Mailer specialist
- Sign writer
- Sample distributor
- Sample distributor crew supervisor
- Sales promotion manager
- Comparison shopper
- Public relations employee
- Research director
- Advertising salesperson
- Sales correspondent
- Advertising layout person
- Display manager
- Media buyer (time and space)
- Sign maker
- Market research analyst
- Marketing research worker
- Media seller (televeision, radio, graphic communications)
- Media researcher

II. TEACHING STRATEGIES

A. GOALS

1. To identify certain commonly held beliefs and customs, and to explain how they affect one's feelings.
2. To describe how economic trends can influence career choice.
3. To explore occupations in PROMOTION AND MARKETING RESEARCH.

B. INTRODUCTORY ACTIVITIES

1. Ask students to compare, in a class discussion, the television commercials they strongly like and those they strongly dislike. Why do they have strong feelings about them? Is there consensus on the likes and dislikes? If so, can they identify any commonly held beliefs or customs that affect their feelings?
2. Show slides, prepared in advance by a committee of students, on people at work in promotion or advertising jobs.
3. Invite an account executive or an advertising manager to visit the class to describe what is done on the job, what qualifications are needed, salary and other benefits, job advancement, where both training and jobs may be found, what the future holds in store, and how economic trends affect jobs in promotion. Ask about the jobs of other people with whom the visitor works.
4. Set up a situation for the class about two towns each having a large factory which employs most of the wage earners in town. In one town the factory is producing well, making a good profit, employing more people and giving raises to employees. In the other town the factory is in the process of shutting down and laying off workers. Discuss in class the impact on advertising jobs in the two towns.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Write an article for the school newspaper about the career education program, with the emphasis on selling others on the idea that career education and exploration is a good thing to have in the school.
2. Develop a promotion campaign designed to increase attendance at a school concert, open house, athletic event, or to vote on a forthcoming school election.
3. Prepare a classroom display of a week's newspaper ads of grocery stores in your area. Devise a way to point out similarities and differences in the ads.
4. Survey all the students in your school, or a random sample of students (be sure you understand what a random sample is) to find out how they feel about billboard advertising. Prepare a report on the results of the survey. What is the job title of a person who does this kind of work? How much and what kind of training and experience are required for this

job? What are the salaries for beginning and experienced workers? Where are the jobs located?

5. Prepare promotion campaigns to sell shampoo to: young children, teen-age girls, teen-age boys, mothers, elderly persons, and adult men.
6. Role play a team of promotion workers, (research director, advertising manager, advertising copywriters, artists and layout workers, media directors and production manager) preparing an advertising campaign for a new sports car. Each role player should present a brief description of the occupation being portrayed, e.g., job tasks, qualifications, salary and other benefits, location of the job, opportunities for advancement, outlook for the future, and impact of economic trends.
7. Prepare a report on how advertising may be used to get people to vote in an election.
8. Discuss in a small group why some people still smoke cigarettes when tests conducted by government laboratories have shown that cigarette smoking is harmful to health. What has happened to cigarette advertising on television, radio, and in newspapers and magazines? What effect does advertising have on the public?
9. Describe how family finances, cost of an education, and future earnings influence choice of a career.
10. Choose a commonly held belief, such as "one needs a good education," or any other which you and most of your friends believe, describe how it affects your feelings, and how it is used in advertising.
11. Interview someone in your community who markets services or products. Discuss how community beliefs and customs affect the promotions used.
12. Assume that you are a comparison shopper who works for a grocery supermarket chain. Prepare a list of items which are sold in most supermarkets. Go to as many different supermarkets as you can. Include your chain, other chains, and individually-owned grocery stores. Write down the prices charged by the various stored for each item on your lists. Try to judge quantity and quality of items as well. Prepare a research report and/or a promotion campaign supporting your product.

4

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

PURCHASING AND SALES

PREFACE

Do you need to earn some extra money? The first sales job you will have is selling yourself to a prospective employer. Can you convince that employer that you have a genuine interest in helping that business to be successful? Are you willing to do well the tasks you might be hired to do, follow orders, take criticism well, go to work regularly and on time, be honest with your employer's time and materials, be courteous and cooperative? Are you enthusiastic about meeting people and about the product or service you have to offer? Choosing the product or service to sell is an important step in planning a career in sales. Do you like the independence of working on your own with little supervision? Can you work under pressure and at irregular hours? Can you work in such a way as to take your family into partnership with you on your job? Selling is hard work, but if you can say yes to most of the questions above, an occupation in sales may be rewarding for you.

Purchasing is an integral part of sales. Materials used to produce the products for sale must be on-hand when needed. Purchasing agents must keep track of supplies, know when to re-order, and know how and where to get the best buys. They must have a thorough knowledge of the product in order to fulfill their part of the process of getting the product to market.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Achievements in school and out of school are often dependent upon interests, aptitudes, and values.
2. There are certain physical, social, and emotional characteristics which make an individual unique.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Mathematics - Units on basic operations.
2. Social Studies - Units on psychology, sociology, and economics.
3. Language Arts - Units on communication skills.

OCCUPATIONS

- Manufacturers's representative
- Sales engineer
- Wholesale salesworker--
  - junior and senior
- Industrial development manager
- Department manager
- Real estate agent
- Auctioneer
- Retail salesworker in:
  - yard goods
  - cosmetics and toiletries
  - china and glassware
  - hardware, tires
  - automobiles, trucks, motorcycles
- Manufacturer's salesworker
- Industrial salesworker
- Sales supervisor
- Sales manager
- Buyer
- Store manager
- Real estate broker
- Real estate appraiser
- Purchasing manager
- Purchasing agent
- House-to-house salesperson
- Reservation clerk

II. TEACHING STRATEGIES

A. GOALS

1. To recognize one's own interests, aptitudes, and values, and to relate those to achievements both in and out of school.
2. To identify one's own uniqueness.
3. To explore occupations in PURCHASING AND SALES.

B. INTRODUCTORY ACTIVITIES

1. Discuss in class the various ways of selling something, e.g., door-to-door, telephone, store sales. Group students according to their preference of method, and have them plan a demonstration for the class. They should choose a product, and plan the sales activities. They may role play a salesperson with a sales-resistant customer, and with an easy-to-sell customer. They may demonstrate ineffective and effective methods.
2. Discuss characteristics which make an individual unique. Identify characteristics with certain occupations. Discuss those characteristics associated with sales persons.
3. Identify in class discussion different kinds of work settings in sales occupations.
4. Invite the manager of a local business who hires students as part-time workers in sales to discuss with the class opportunities for part-time work and what employers look for in applicants.
5. Invite the distributive education teacher at the high school or community college to discuss sales occupations in general and the distributive education program in particular.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Select a product or a service to sell (Girl Scout cookies, lawn mowing or snow shoveling). Keep a record of your sales and the methods you used. List the responses of your potential customers. Write down how you felt about trying to sell something.
2. Select a product or a service and prepare and present to the class a persuasive speech designed to sell that product or service.
3. Arrange with the teacher to ask students to bring to class "white elephant" items. Conduct an auction to sell these items to other class members.
4. Present a role-playing situation to the class. One student role plays a car owner who is planning to buy car insurance. The other student role plays the insurance salesperson. Visit an automobile insurance agent to get all the information you need. Ask the agent what training and experience are needed for this occupation, what is liked and disliked about it, and what the expectations are for fifteen or twenty years from now.

5. Arrange to spend a day with a real estate, automobile or other salesworker on the job. Keep a record of the day's activities in chronological order, as in an appointment book.
6. Arrange to spend a day with a purchasing agent of your school, a hospital, or any other local business. Keep a record of the day's activities.
7. Arrange with your teacher to supply soft drinks for everyone in your class on one special day. You will be the purchasing agent. Take orders from the class members, finding out what kind of soft drink each person wants. Decide when you will have the students pay you, and be prepared to pay your supplier.
8. Role play a customer who recently purchased a small electrical appliance and is dissatisfied with it, and the salesworker who sold it. How does the salesworker keep the customer's good will and still protect the store from excessive loss in refunds?
9. Assume that you are a salesworker for a company in Chicago that manufactures typewriters. Your area is half of the state (you may choose either the northern or southern half). You have received inquiries from businesses in six cities in your area about buying typewriters for resale in retail stores. Plan your itinerary, your expense account, your selling program,and your leisure time if any. Ask a salesperson who has a large territory to cover for help with this. Get additional information from this person about training, experience, and personal qualities needed for this occupation, its rewards and frustrations, its relationship to family and leisure-time activities, and outlook for the future.
10. Talk to the personnel manager, the store manager, or whoever does the hiring of employees in several businesses. Find out how important selling is to the business, the range of salary, from the lowest paid salesperson to the highest. Ask why there is a difference in the amount of salary paid to salespersons, and how the salary is determined, by straight salary, salary plus commission, straight commission, or other. Find out what a sales chart is and prepare a chart similar to a sales chart for classroom display showing your findings.
11. Review information in your personnel file about your interests, aptitudes,and values. Have any of these changed? Identify as many of your achievements as you can, both in and out of school. How do your interests, aptitudes,and values relate to those achievements?
12. Interview the sponsor or a member of the Debate Club, if your school has a Debate Club. Find out why people participate and how participation might be helpful to someone who is interested in a career in sales.
13. Develop a personal profile which identifies your uniqueness. Identify achievements you have made in or out of school, e.g., jobs, and academic, club, athletic, and/or religious awards.

5

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

DISTRIBUTION

(Transportation, Storage and Stock Control)

PREFACE

Distribution, as a part of the Business, Marketing, and Management Occupations, deals with the routing of a product from producer to user. There are four main routes of distribution: From the manufacturer direct to the consumer; from the manufacturer to a retailer to the consumer; from the manufacturer to a wholesaler to a retailer to the consumer; and from the manufacturer to a chain store organization to the consumer.

Do you like detailed work in which you would be involved in keeping track of things? Are you physically able to be on your feet for long hours at a time and to handle heavy items? Do you like keeping things neat and in order? Do you like driving a truck, being on the road, and meeting all kinds of people? Do you want to start working as soon as possible instead of going to college? Jobs in distribution offer a wide range of choices, from inside desk jobs to outside heavy labor, from less than high school (though most employers prefer high school graduation) to college graduation or graduate school.

As long as goods are manufactured those goods will be distributed to the consumer, therefore the employment outlook is favorable.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Earnings vary with occupations.
2. Specialized occupations result in an interdependent society.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Mathematics - Units on basic functions and record keeping.
2. Language Arts - Units on communication skills.

C. OCCUPATIONS

Chief dispatcher
Manager of operations
Station manager
Traffic manager
Salesperson
Manifest clerk
Materials handler
Power and truck operator
Claims adjuster
Route supervisor
Shipping and receiving clerk
Branch manager
Dispatcher clerk
Shipping and receiving supervisor
Traffic Clerk I and II
Equipment inventory clerk
Mail order filler
Weigher
Tank calibrator
Material lister
Parts lister
Progress clerk
Road clerk
Counter
District sales representative
Regional manager
Terminal manager
Warehouse manager
Billing clerk
Stevedore (dock worker)
Crane operator
Dispatcher
Parts order clerk
Loading supervisor
Stock handler
Stock supervisor
Rate supervisor
Expeditor
Returned goods receiving clerk
Sorter
Receiving checker
Shipping checker
Equipment records supervisor
Process-control-clerical supervisor
Yard supervisor
Observer, water-sales measurements
Ticket marker
Claims clerk

See Unit #7 on Transportation in Personal and Public Services Cluster for occupations in land, air, and water transportation.

II. TEACHING STRATEGIES

A. GOALS

1. To identify the relationship between experience, level of education, job duties, and earnings.
2. To explain how one distribution job may be dependent on many others.
3. To explore occupations in DISTRIBUTION.

B. INTRODUCTORY ACTIVITIES

1. Brainstorm in class the reasons why people work at income-producing jobs. Discuss the relationship between the reasons for working and the earnings.
2. Invite the person in charge of the school lunch program to visit the class to discuss how delivery of supplies affects the school lunch program. Follow up with a discussion of the different kinds of jobs involved in getting food from the farmer to the student.
3. Present slides prepared in advance by a group of interested students showing persons at work in distribution jobs in your community.
4. Discuss in class what would happen in your community in the event of a major truck strike.
5. Visit a local manufacturing business. Find out how raw materials are acquired and what is done with the product after its manufacture. Is it complete in itself or is it sent somewhere else for completion? How does it eventually get to the consumer? Ask how the company is assured of having the necessary raw materials.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a poster for classroom display that shows the routing of milk from the farmer to the school lunchroom. Be able to explain the interdependence of the various jobs involved in the routing. Choose a method for getting this information to the class.
2. Arrange, if possible, to accompany a route person for one day. Keep a log of activities, and talk with this person about training and experience needed for the job, advantages and disadvantages, possibilities for advancement, and what the outlook for the future is. This could be a person who delivers soft drinks, bakery goods, auto parts, etc. Are the products delivered directly to the consumer, or to a wholesaler or retailer?
3. Prepare a panel discussion on the route of petroleum from the oil well to a plastic coat that a student has. Arrange for each panel member to be responsible for a certain segment of the route. Decide the order in which panelists will present their statements. How does the order of the panelists compare with the route of the petroleum? What happens if

one panelist is absent or fails to present that segment of the program?

4. Choose two occupations in distribution, one of which requires less than high school graduation, the other one which requires college graduation. Discuss the two jobs, comparing and contrasting levels of education and experience required, job duties, advantages and disadvantages (what one person sees as an advantage, another may see as a disadvantage) earnings and other rewards, and outlook for the future.
5. Collect several boxes of different sizes and shapes. Have a contest to see who can arrange them so they are all stacked together in the smallest possible space.
6. Plan with your teacher to store supplies in a compact, orderly and easily accessible manner, to make an inventory file, and be the distributor of those supplies to classmates.
7. Visit the school stockroom. Observe how the materials are received, stored, inventoried and distributed.
8. Prepare a "Yellow Pages" of distributors in your community. Identify the distributors' sources of products and distribution points.
9. Interview your school administrators to find out who distributes materials to and within the school. Prepare a chart showing the materials distributed to and within the school, and some student activities which consume or change the materials into a new product.
10. Talk with the person who stocks shelves in two or more of the following: a grocery store, an auto parts store, a hardware store, a drugstore, a clothing store, a jewelry store, a bakery, a furniture store, a carpet store, or a department store. Compare and contrast job duties, training and experience needed, pay scale,and effects on lifestyle (e.g., hours worked). Plan a way to present your learnings to the class.

6

OCCUPATIONAL CLUSTER
BUSINESS, MANAGEMENT AND MARKETING OCCUPATIONS

TOP MANAGEMENT

PREFACE

Are you the oldest child in your family and sometimes responsible for younger brothers and sisters? Are you a leader in the organized and unorganized groups to which you belong? Do you like planning and making decisions about school and family activities? Can you "take charge" of things in such a way that other people want to follow your suggestions? Are you doing well in school and planning to go to college? If so, then you may want to consider a career as an executive or administrator or manager, the "boss".

In addition to choosing to be a leader, you will need to decide in what area you want to be a leader. If you want to be a leader in education, then you will need college training and experience in teaching and in supervision. If you want to be a leader in engineering or science, then you will need advanced technical training and experience. If you want to be either a business or political leader, you will need specialized training and experience in those areas.

Nearly all administrative jobs require a college degree. Some employers require a background in business administration, the liberal arts,or in technical areas such as engineering or science. Most administrators are decision-makers, problem-solvers, and work with other people in order to handle the flow of work. Employment in this area is expected to grow as businesses become more complex and organized.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Awareness of oneself within the context of the family structure is important.
2. Career-oriented learning may take place in or out of school.

B. SUBJECT MATTER AREA REALTIONSHIPS

1. Social Studies - Units on psychology and sociology.
2. Language Arts - Units on listening, reading, speaking, writing.

C. OCCUPATIONS

Administrative assistant
Office manager
Credit union supervisor
Chief accountant
Public relations director
Economist
School superintendent
Budget officer
Contract specialist
Owner/manager
Chief clerk
Operations officer
Store manager
City manager
Urban planner (regional or community planner)
School principal
Treasurer
President

Some top management occupations are also listed in other units.

II. TEACHING STRATEGIES

A. GOALS

1. To demonstrate awareness of one's role in the family in relationship to the demands of a career as an executive.
2. To identify skills and knowledge needed for an occupation in management which may be acquired both in and out of school.
3. To explore occupations in TOP MANAGEMENT.

B. INTRODUCTORY ACTIVITIES

1. Show a movie or a filmstrip of an executive at work.
2. Invite the school superintendent or principal to visit the class to discuss, first, the job duties, rewards and frustrations, and then preparation needed, outlook for the future of this kind of job, effects of the job on family life, and effects of family life on the job. Ask about school and community leadership activities in which this person participated as a student.
3. Ask parents who are executives to present a panel discussion on their jobs, covering the topics in activity two above.
4. Brainstorm in small groups and make a list of the personal qualities required for success as class president or editor of the yearbook or school paper. Make a copy of the lists and hand out to students for their personnel files.
5. Ask students, after the small group discussion, to identify those students who took leadership roles. What personal managerial qualities did they display? Are these students leaders in other situations? How does one who wants to be a leader develop leadership skills?
6. Invite the school counselor to visit the class to discuss leadership skills.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Interview the following people at their places of business and compare and contrast the jobs of two or more of the following:
    a. A hospital administrator.
    b. A grocery store manager.
    c. A public relations director of a television or radio station.
    d. A mayor or city manager, or an administrative assistant in town or city government.
    e. An office manager in an industry.
    f. An urban (regional or community) planner.

    (Be sure to find out what leadership positions or activities they participated in during their time as junior high and high school students.)
2. Prepare a series of biographical sketches of well known managers. Include the following: position in family (youngest, eldest, middle, only child);work experiences as a youth; leadership

experiences; training for position; adult leadership roles. Draw some conclusions.

3. Prepare a bulletin board display, a poster or a scrapbook depicting a person performing tasks related to one of the occupations in this unit.
4. Prepare and present to the class a dramatization of an office manager during a new clerical worker's first day on the job. The office manager introduces the new employee to other workers, and explains the job duties. Research ahead of time the skills and knowledge needed by the office manager for this particular task.
5. Prepare a time schedule for a week showing how you will use your time. (See a sample form at end of unit.) Indicate times and activities, e.g., when you will: Be in class, do homework, get up in the morning, go to bed at night, eat, do tasks around home, attend meetings, practice (piano, basketball, etc.), watch television, visit friends, go to a movie or church, or other activity. Follow your schedule as closely as you can. At the end of the week, make revisions and plan a new schedule for the following week. Identify problems encountered in keeping to the schedule. How were changes made? What were the effects of the changes?
6. Assume you are an administrative assistant to a regional planner. The planner is to give a talk to the Kiwanis club on traffic safety near your school, and has asked you to gather information for the talk. Arrange to study the traffic situation around your school, where school buses load and unload, where parents pick up and drop off students, and bicycle and pedestrian traffic. Prepare a report on the number of cars at school entrances, hazardous crossings for bicyclists and pedestrians. Include unsafe incidents that you see, and any other information that will help the planner make decisions to improve traffic safety.
7. Review in a small group the list of personal qualities needed by executives that was developed earlier. Add to this other skills and knowledge needed. Prepare two posters titled "In-School Learnings" and "Out-of-School Learnings." List under each title the personal qualities, skills,and knowledge that may be acquired in each environment. Other posters may be prepared according to subject matter area, or different out-of-school areas such as family, youth group, communications media (television, radio, printed matter.)
8. Choose an occupation in this unit you would like to have. Study some college catalogs, in the guidance office or the library, to find what courses of study are offered for the occupation in which you are interested. Compare courses of study and costs of financing and education at several colleges. Decide what other factors are important to you in choosing a college, e.g., how close it is to your home, whether it is a large or small school, private, state-supported or church-related, and extra-curricular activities. Choose the college you think best fits you, describe it briefly, outline the course of study you will follow, and itemize expenses.

related, and extra-curricular activities. Choose the college you think best fits you, describe it briefly, outline the course of study you will follow, and itemize expenses.

9. Prepare a report on how changes in technology may or may not affect occupations in top management. This may be written, oral, or taped.
10. Assume that you are going to run for an elective office in the next election in your town. What are the leadership qualities that voters will support? What are some of the problems in government leadership in your town, in the state, and in the nation about which the electorate is concerned? Decide how to present this information to the class.
11. Prepare a debate with other students on one of these topics:
    (a) Be it resolved that leaders in local, state, and national government now and in the future, will have to ensure good character in leadership.
    (b) Be it resolved that the same qualities of leadership are required of leaders in government and in business and industry.

Activity C-5

BUDGET OF TIME

In the left column, write in half-hour periods, beginning with the time you get up in the morning, (for instance, 7:00-7:30), and ending with the last half hour before you go to bed (for instance, 9:00-9:30). You may write in the hours you are at school on week days in one space--8:45-3:45. In the columns under the days of the week, put the activities for the half-hour. First, make a schedule of the way you use your time now. Then, make another schedule, showing how you could use your time better. You may need to make several schedules before you find the one best for you, and even then, you may need to revise from time to time. If you have questions about this, talk with your teacher or your counselor.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

7

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

PERSONNEL MANAGEMENT

PREFACE

Is a college degree definitely in your future? Do you like working with people, helping them? Do you want to be part of a team of workers? Do you like solving knotty problems, resolving differences between people, directing the activities of others? Do you have a strong sense of responsibility? If you answered yes to most of these questions, you may want to consider a career in personnel management. Of paramount importance is liking people and being able to work with them as team members, as superiors and as subordinates. Hiring the best workers and matching them to jobs at which they can be successful is of value to both the employer and employee.

Even the beginning jobs in this field require college graduation, and some require an advanced degree. The area of specialization varies from one employer to another, with some wanting degrees in business administration, industrial and labor relations, political sciencs, law, or education, and others wanting technical degrees such as science or engineering.

Seventy-five percent of personnel and labor relations workers are employed in private industry and most of the rest are in local, state, and federal government. Only a few are hired by labor unions in national and international headquarters in research and education to advise elected union officials at all levels.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual has social, physical and intellectual aptitudes for various tasks.
2. Previous decisions, peers, gratifications, needs, interests, and career information influence present and future decisions.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on psychology, sociology, economics.
2. Math - Units on basic functions and statistics.
3. Language Arts - Units on communication skills.

C. OCCUPATIONS

Job analyst
Test technician
Personnel recruiter
Employment clerk
Identification clerk
Labor relations specialist
Interviewer
Educational director
Training supervisor
Vocational disability examiner
Position classifier
Placement officer
Benefits and service records supervisor
Social security clerk
Salary and wage administrator
Safety director
Personnel manager
Civil service clerk

II. TEACHING STRATEGIES

A. GOALS

1. To identify one's own social, physical, and intellectual aptitudes and to recognize them as one's own in comparison to those of others.
2. To identify previous decisions, peers, gratifications, needs, interests, and career information which have influenced present decisions and which may influence future decisions.
3. To explore occupations in PERSONNEL MANAGEMENT.

B. INTRODUCTORY ACTIVITIES

1. Ask the school counselor to visit the class to explain what kinds of information are kept in student cumulative folders, and to compare those folders with personnel files of employees. Compare tests that are given to prospective employees with the achievement, aptitude, and interest tests that are given to students. Discuss who decides what information should be in cumulative folders, and how that information is used.
2. Brainstorm in class the social, physical, and intellectual characteristics needed for success in personnel management. Encourage students to make a similiar list for the occupation of their choice to place in their personnel file.
3. List on the chalkboard the occupations students thought they wanted five years ago. Compare those with present tentative choices. Discuss how present choices may be changed by the time of high school graduation. Identify some of the factors which influence career choice. (See Goal #2 above.)
4. Invite a labor relations specialist to visit the class to discuss the work of a labor relations specialist, e.g., background, present duties, outlook for the future. The visitor might work with a group of students to simulate a negotiations process between employer and employees.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Talk with your school counselor individually about the information in your cumulative folder. What effect does this information have on career decision making?
2. Bring your personnel file up to date, if it isn't already. (This activity relates to the file begun in the Introductory Unit at the beginning of the Curriculum Guide.)
3. Prepare a presentation for the class using overhead transparencies to show the kinds of forms used for employee personnel files.
4. Prepare a job description for personnel management jobs.
5. Plan in a small group and present to the class a role-playing situation in which one person is an interviewer, and the others are applicants for a job. Decide ahead of time what each applicant's role is as to level of education and experience, personal qualities, demeanor during the interview, etc. Interview all

candidates then select the candidate to be hired, and discuss with the class the reasons for that choice.

6. Make a list of those influences which have affected your present career decision. Include friends, hobbies and other interests, certain needs you may have (e.g., to work alone or to work with other people), activities which have given you satisfaction, career information you have acquired, and previous decisions you have made (e.g., "I have decided to go to college." or "I have decided to get a job just as soon as I can.")
7. Prepare a notebook of job descriptions of jobs in your school building or in another place of employment. Decide ahead of time what should go into a job description, and then observe and ask questions to gather the information.
8. Review the list of social, physical, and intellectual characteristics usually needed for success in personnel management. Are there others that should be added? If so, add them and then compare your personal characteristics with those on the list. Write a brief statement on how your characteristics would or would not contribute to success in this field. Place this statement in your personnel file.
9. Prepare a role-playing situation in which a labor relations specialist is negotiating a new contract between an employees' union and the employer. Gather information from newspapers, magazines, radio, television,and local sources such as business, industry, or education unions which negotiate contracts. If possible, arrange to visit a negotiating session.
10. Visit a hospital or other local business which has an educational director. Find out about that person's job, e.g., background of training and experience, job duties, satisfactions and dissatisfactions with the job, social, physical, and intellectual aptitudes needed, and why and how this person chose this job.

8

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

PRODUCTION MANAGEMENT

PREFACE

Occupations in production management generally require a college education. A few people may, over a period of years, work their way up through other jobs in the company.

Workers in production management are usually involved with both people and things--products, machinery, etc. Their main goal is the efficient production of goods or services. To achieve that goal, they may study plant location in relation to raw materials, plan the layout of machinery, the movement of materials, and the sequence of operations. They may conduct surveys and make statistical and time and motion studies. Other management personnel may be responsible for purchasing materials used in production, for controlling the quality of goods produced, for distributing the work, and supervising workers.

If you like responsibility, like to plan and organize, like to find more efficient ways of doing things, and intend to finish college, then you may want to look further into careers in production management.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. It is important for a person to be able to make the transition from one job to another.
2. Moral principles are an integral part of one's work life.

B. SUBJECT MATTER AREA

1. Industrial Arts - Units on efficient means of production.
2. Mathematics - Units on basic functions.
3. Language Arts - Units on communication skills--reading, writing, listening, speaking.

C. OCCUPATIONS

- Purchasing manager
- Industrial engineer
- Supervisor
- Work distributor
- Quality manager
- Production manager
- Claim examiner
- Chart changer
- Time and motion study engineer
- Overseer
- Engineer
- Production planner
- Yields supervisor
- Material coordinator
- Production coordinator

II. TEACHING STRATEGIES

A. GOALS

1. To identify skills and behaviors that facilitate the transition from one job to another.
2. To describe how one's ideas of right and wrong may affect one's attitudes toward an occupation.
3. To explore occupations in PRODUCTION MANAGEMENT.

B. INTRODUCTORY ACTIVITIES

1. Invite a person employed in a production management occupation to visit the class to present an overview of that job. Ask how that person arrived at the present job, how the transition was made from previous jobs. Inquire how value systems, ideas of right and wrong have affected performance on the job.
2. Brainstorm in class the ways in which society both creates and depends on moral principles. Relate this to jobs in production management, e.g., a purchasing agent depends on the quality of raw materials ordered, but takes certain steps to ensure that quality.
3. Plan ahead of time to invite a group of parents who have changed jobs to visit the class and discuss the transition process. Include discussion of intellectual, social, and physical skills that were helpful in the transition.
4. List all the products that must be purchased in order to manufacture a student desk. Then look around the classroom to identify other manufactured items and list the products that must be purchased to manufacture them. Expand this activity to include additional manufactured items bought by the school district, e.g., the products that must be purchased to manufacture a school bus. Continue to expand to include all kinds of items manufactured for use by families, by communities (street lights as one example), by states, and nationwide. The purpose of this activity is to stimulate students into awareness of the enormity of production and production management.
5. Collect ahead of time one individual-serving size cereal box for each student in the class. Collect also small prizes for each of the boxes. With a small group of students, simulate an assembly line filling the boxes and adding the prizes. Arrange privately with one student to put every tenth prize in his/her pocket instead of the box. Have a distributor give a box to each student, and ask students to hold up their prizes for everyone to see. Note that some do not have prizes. Make a consumer complaint to the supervisor. How does the supervisor handle the situation? Relate this activity to industry. What could be the consequences of a worker not performing the assigned task correctly? What moral principle is being violated?

6. Plan ahead of time for a student to perform a task in two ways, the first being done in an unorganized, ineffecient manner, the second being done in an organized efficient way. Have students role play an industrial engineer who makes a time-and-motion study of the performance of the first task and then makes recommendations for improving efficiency. Use recommendations to repeat the performance. Relate this activity to the role of the industrial engineer or production planner and to the students' own means of getting things done efficiently.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Discuss in small groups the ways in which morals are at work in the classroom. What would the class be like without them?
2. Assume that you are a junior in high school, and you want to become a production planner in the spacecraft industry. Prepare a chart on which you show the steps you would take from the present time to employment as a production planner. Include education, part-time jobs, and full-time jobs which would lead you to your goal.
3. Research and discuss in small groups the intellectual, social, and physical skills needed for selected occupations in production management. Each group should choose one of the three skills and relate it to at least three occupations. Plan and carry out a method for presenting this information to the class.
4. Choose an occupation in production management you think you would like. Prepare a 'brief' on that occupation. Then describe which of your skills, interests, and values would contribute to success in that occupation, and which others would make it difficult to be successful. Decide whether you could change some of the factors that would handicap success. If so, how would you go about changing them?
5. Prepare and conduct a time-and-motion study of three people, each on a different day, but in the same setting, as they prepare themselves to work in a class study period or study hall. Record the beginning time and each succeeding activity until the person is actually studying. Record the time again. Draw conclusions as to each subject's efficiency.
6. Observe someone at home as that person performs a routine task such as preparing a meal or dusting the furniture in a room. Write down each movement and time the activity. How could the task be done more efficiently?
7. Select a product that most students in your school use. Make a survey of all the students in your grade, or take a random sample to find out how they would like to have the product improved. (Be sure you know what a random sample is. You may check with one of your teachers on this.) Assume that you are a marketing research worker, and write up a report on your findings for the vice president in charge of production.

9

OCCUPATIONAL CLUSTER
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

FINANCE, CREDIT, AND INSURANCE

PREFACE

An occupation in finance, credit, or insurance requires a good background in mathematics and economics plus an interest in detailed work, honesty, and the ability to meet and communicate well with customers and co-workers. Education requirements range from less than high school (for guards and building service personnel) to high school graduation (for most clerks) and college graduation (for professional and managerial workers).

Some office jobs (secretaries, stenographers, receptionists, office machine operators) are similar to those in other businesses. Some are unique to the banking, finance and insurance industries (bank clerks, proof machine operators, collection clerks, transit clerks, and claims adjusters, claims examiners, and underwriters).

Advanced training is often required of some workers, particularly if they want to move up in the firm. Training may be provided by some colleges, or by specialized groups such as the American Institute of Banking, the Life Underwriting Training Council and the Chartered Property Casualty Underwriter. There will be changes in some jobs as a result of more sophisticated computers and other office equipment.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Individual economic needs and wants differ.
2. An individual's decisions affect self and others.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Mathematics - Units on basic functions.
2. Social Studies - Units on economics.
3. Language Arts - Units on communication skills-- reading, writing, listening, speaking.

C. OCCUPATIONS

Bank cashier
Credit analyst
Investment and Tax counseling service salesperson
Application clerk
Accountant
Insurance broker
Claims examiner
Property underwriter
Group underwriter
Commercial account underwriter
Cost and sales record supervisor
Chief payroll clerk
Payroll division supervisor
Chief timekeeper
Bank reconciliation clerk
Currency exchange cashier
Insurance office manager
Margin clerk
Coin machine operator
Credit card clerk
Bank president
Other financial institution manager
Loan counselor
Currency sorter
Tax accountant
Broker
Pari-mutuel cashier
Safe deposit clerk
Bank clerk
Financial service salesperson
Brokerage clerk
Broker's floor representative
Credit manager
Collection worker
Insurance agent
Claims adjuster
Life insurance underwriter
Liability underwriter
Casualty underwriter
Actuary
Securities salesworker
Insurance clerk
Estimator
Mortgage loan computation clerk
Cashiers supervisor
Teller
Head teller
Audit machine operator
Dividend-deposit-voucher quoter
Foreign exchange trader
Bank officer
Credit and collection manager
Safe deposits manager
Bank examiner
Auditor
Cashier-wrapper
Statistician
Insurance examiner

II. TEACHING STRATEGIES

A. GOALS

1. To identify one's own economic needs and wants and to recognize how they may differ from those of other people.
2. To identify the ways in which decisions one makes affect oneself and others.
3. To explore occupations in FINANCE, CREDIT and INSURANCE.

B. INTRODUCTORY ACTIVITIES

1. Ask a bank loan officer to visit the class to discuss that job. Ask the loan officer to bring a copy of a loan application for each student and to explain how it should be filled out, its use, and how loan decisions are made.
2. Brainstorm in class and list on the chalkboard economic needs as students identify them. Discuss the difference between basic needs and wants, and strength of desires for needs or wants. Relate these to career choice.
3. Invite a life insurance agent or broker to visit the class to discuss that occupation and to give students an awareness of kinds of life insurance. Ask this visitor to focus part of the discussion on the ways in which decisions one makes affect oneself and others.
4. Visit an insurance office. Help students be prepared to observe what workers do and to ask appropriate questions. Alert them to be ready to role play one of the jobs.
5. Obtain various charts and tables used in selling insurance and help students understand how they are used. An insurance worker may be asked to help with this activity.
6. Invite an investment and tax counseling salesperson, a brokerage clerk or a broker's floor representative to visit the class to explain that occupation and why it was chosen. Ask the visitor to focus part of the presentation of the items under Career Development Focus.
7. Think of a recent incident in class or in school in which an individual (student or faculty) made a decision which had an impact on the individual and the class or school. Discuss this in class. What incidents led to the decision and what were the resulting effects? Relate this to decision-making on the job.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Role play a situation in which one person is a bank loan officer and the other is a person applying for a loan. Each actor should plan ahead of time the role to be played, e.g., define the applicant's background and have information to fill out an application for a loan. The applicant may ask questions of the loan officer about filling out the applica-

tion form. The loan officer must have an application form and know what questions to ask the applicant.

2. Role play the following situations: a. A high school junior who is applying for automobile insurance, and the insurance agent or broker who sells insurance; and b. A 35 year-old man who is married, has three children, none of whom is old enough to drive, and is applying for automobile insurance. Identify differences and similarities in insurance policies and premiums.
3. Compare and contrast in small group discussions individual economic needs and wants. Before group discussions begin, ask each student to list ten need or want items in rank order with the most important one first. After comparing and contrasting, ask students to re-examine their lists to see if they want to make any changes. This list should be placed in the personnel file. (Refer to the Introductory Unit at the beginning of the Curriculum Guide for the activity developing the personnel file.)
4. Discuss in a small group how a career decision made by a parent affects the family. For example, a bank clerk may work a routine 40 hours a week, and a life insurance agent may work many evenings and week ends. Each group member should select a specific occupation for research prior to the discussion so that there is correct information on which to base the discussion. Present the learnings to the class.
5. Assume that you are a claims adjuster for an automobile insurance company. Someone has had an accident and the company has given you the claim to handle. Research the job of a claims adjuster and then follow the correct procedure for handling the claim.
6. Prepare and present a panel discussion on the advantages and disadvantages of borrowing money and the various institutions established to provide loans.
7. Make a collection of the various kinds of forms used in a bank. Identify and label each one as to its use. Decide how to present this collection for other class members to see.
8. Make a "Yellow Pages" of Finance, Credit and Insurance Companies in your area. Identify each of their specialities such as house insurance, farm credit, or car loans.
9. Ask if you may be permitted to count, sort and wrap the money taken in at a school event, i.e., a ball game, sales of the school paper, or the yearbook.

OCCUPATIONAL CLUSTER

"C"

HEALTH

TABLE OF CONTENTS

Health Occupations Units

1. Medical 151
2. Dental 155
3. Nursing 161
4. Health and Medical Research and Communications 165
5. Physical, Mental and Social Rehabilitation 169
6. Clinical Laboratory and Related Technical 175
7. Environmental and Public Health 179
8. Administrative, Business and Clerical 183
9. Other Related Health Specialties 187

1

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

MEDICAL

PREFACE

Do you like people to look to you for help and count on you to make them feel better? If your answer is yes, then consider a health occupation. If you like to work directly with people, then you may narrow your search for a career to the area of medical services.

This unit will focus on the medical services which include the general practitioner, the family physician, other physicians who specialize in certain fields of medicine, and a newly emerging occupation known as physician's assistant. Workers who are happiest and most successful in these occupations are those who like people very much and want to help them. These workers are willing to spend many years in preparation for the job. With few exceptions, six years or more of education and training beyond high school are required. The physician's assistant may have only two years of formal education beyond high school. For all medical workers, learning must continue throughout the career lifetime. They must keep up to date on the newest developments in medicine.

Working hours are often long, and the worker's life must be planned around the needs of the patients. Financial rewards for this kind of service are usually very good with the higher incomes going to persons who have spent the greater amounts of time and money in preparation for a career. Financial rewards may also be dependent on where physicians work, and whether they are salaried or paid on a fee basis. Opportunities to establish new practices as well as enter salaried positions should continue to be favorable. There are other kinds of rewards important to persons in medical careers--knowledge that one is helping others, healing, relieving pain--that make the years of preparation and long hours of work worthwhile.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Relationships exist between desired lifestyles and career monetary rewards.
2. There is a relationship between an individual's knowledge and acceptance of self, and career preference.
3. Setting goals can be enhanced by analyzing decision-making processes.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on psychology, on understanding human behavior, and on increasing knowledge of the self.
2. Science - Units on human anatomy, medical terminology, tools and techniques of science, and properties and behavior of matter, as bases for further courses in science.
3. Health - Units on communicable and non-communicable diseases, nutrition, and the relationships of physical and mental health.

C. OCCUPATIONS

Family physician
Osteopathic physician
Obstretric physician
Geriatric physician
Pediatrician
Podiatrist
Surgeon
Ophthalmalogist
Psychiatrist
Internist
Anesthesiologist
Neurologist
Cardiologist
Urologist
Gynecologist
General practioner
Optometrist
Chiropractor
Orthopedic surgeon
Pediatrician's assistant
Physician's assistant
Orthopedic surgeon's assistant
Optometrist's assistant

II. TEACHING STRATEGIES

A. GOALS

1. To identify the lifestyle one would like to have as an adult and ways to acquire that lifestyle.
2. To relate knowledge and feelings about oneself to a medical career.
3. To identify the various levels of training in preparation for a chosen medical career and to set goals for achieving each of those levels.
4. To explore occupations in MEDICAL SERVICES.

B. INTRODUCTORY ACTIVITIES

1. Have a committee of students help plan and implement introductory activities. It may be helpful for them to have an over-view of the nine units so they understand the occupations included in each of the units. Arrange for the committee to visit a hospital and take pictures that can be made into slides for a class presentation, or borrow the materials developed by the hospital staff.
2. Present an overview of the nine units in the Health Occupations Cluster. Clarify the focus in this unit on "medical careers" as separate from the other eight units.
3. Discuss in class, and list on the chalkboard as many medical occupations as students can think of, from the physician's assistant (general or specialized) to the general practitioner, the family physician, and other specialities.
4. Invite a physician to visit the class to describe preparation for a medical career: lifestyle, continuing education, career rewards (monetary and otherwise), goals that had to be set, decisions that had to be made, how those decisions were made, and personal, qualities needed by a physician. Compare and contrast the jobs of physician and physician's assistant with regard to the above points. Discuss whether or not medical television dramas portray the life of medical workers realistically.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Choose one of the medical careers listed on the chalkboard, research it and prepare a report to the class. Emphasize training and costs, personal qualities, career rewards, lifestyle, and where practices may be established. List the goals one must reach in order to enter that occupation. Identify the decisions that must be made to reach each goal.
2. Prepare a description of a preferred lifestyle. Include kind of work, hours of work, income, housing, recreation, community and church activities, if any, and geographic location. Suggest occupations which would fit the type of lifestyle selected. Place the lifestyle description in the personnel file.
3. Identify a communicable disease, describe how it is transmitted, its incubation period, its treatment, and ways of preventing it.

4. Prepare a poster showing a human skeleton and identifying the bones of the body.
5. Role play parents helping prepare a child for the experience of going to the hospital for a tonsillectomy.
6. Prepare a glossary of medical terms used to describe parts of the body.
7. Prepare a chart showing how metric measurement is used by a physician.
8. Visit a school counselor to find out what aids are available to help finance education for a medical occupation.
9. Prepare a panel discussion on what constitutes lifestyle. Consider salary, money management, priorities, size of family, married or single, investments, education, occupation, inheritance.
10. Arrange with your teacher and a member of the medical services to spend a day on the job. Carry a notebook in which to record observations which should be shared with the class.
11. Set up a simulation activity depicting a physician's office. Be sure each role player knows the duties and has real or simulated equipment. Write on cards the ailments each of the patients will have who are to be cared for in the office.
12. Prepare a demonstration of bone fractures using models. Invite class mates who have experienced broken bones to share their treatment experiences.
13. Set up in the classroom a microscope with some sample slides, e.g., blood, tissue etc.
14. Prepare a display of the disposable items used by physicians. Indicate the use of each item.

2

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

DENTAL

PREFACE

How do you feel when you know you have an appointment with the dentist? How does the work of persons in dental occupations help you? One's total physical health is related to the health of the mouth. The dental worker therefore, in addition to knowing specifically about the care and treatment of the mouth, must know about general body functions and states of health and disease.

Persons wanting to work in a dental occupations may choose from one requiring only one year of training beyond high school to one requiring eight or more years beyond high school. A prospective dental worker must begin setting goals and making decisions early in high school. The jobs in the dental area range from the dental aide, who may learn on the job, to the dentist who may specialize in one area of dentistry.

Dental workers perform the essential and important services which aid the individual in maintaining good dental health. Employment is expected to grow due to population growth, public awareness of need for dental care, and expansion of prepayment arrangements for dental costs.

I. INSTRUCTION INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual should be aware of the tasks that are performed and begin to determine one's interests in these tasks.
2. Decision making plays a role in the setting of immediate and long range goals.
3. Occupations have their own vocabularies.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on scientific terminology, human physiology, tools and techniques of science, and properties and behavior of matter.
2. Health - Units on tooth care and on nutrition as it relates to healthy teeth and gums.
3. Industrial Arts - Units on use of basic hand tools, with a focus on eye-hand coordination.
4. Home Economics - Units on nutrition.

C. OCCUPATIONS

Dentist
Dental aide
Dental lab technician
Oral surgeon
Periodontist
Prosthodontist
Dental researcher
Dental assistant
Dental hygienist
Orthodontist
Endodontist
Pedodontist
Dental educator
Dental office manager

II. TEACHING STRATEGIES

A. GOALS

1. To identify tasks that the individual enjoys doing.
2. To understand that occupations have terminology unique to their field.
3. To identify short- and long-range goals in preparing for a dental occupation.
4. To explore occupations in DENTISTRY.

B. INTRODUCTORY ACTIVITIES

1. Invite a dental hygienist to visit the class. Ask the hygienist to demonstrate on an artificial model of the teeth the use of various tools, and correct brushing and flossing techniques. Encourage students to question the hygienist about interests helpful to a dental worker, personal qualities needed, career preparation, and relationship between total physical health and the health of the mouth.
2. Arrange for a committee of students to visit a dentist's office well ahead of time to take slides for presentation to the class.
3. Have a student who wears braces, and is willing to talk about it, describe the treatment beginning with the decision to have braces, the final removal and any continuing care needed.
4. Prepare a list of dental terminology. Have the class identify common words used for the same terms. (See supplement at end of unit.)
5. Have students list the tasks each enjoys doing. Make another list which shows the environment in which students would like to work, e.g., indoors, outdoors; work alone, with a few other people or with many people; be your own boss, be a co-owner, or work for someone else who takes responsibilities for and makes decisions about the business; prefer a quiet place to work, or like lots of hustle and bustle. Exchange lists with classmates who will suggest occupations for that student to consider. Compare the suggestions with the individual's previous selections. (See student form at end of unit.)
6. Lay out career preparation plans for a dentist, a dental hygienist,or a dental assistant. Compare the preparation required for each of the occupations. A small group may do this, making decisions as to how to present the information effectively, short-range and long-range goals for completing the project, and individual responsibilities. Have students layout their own individual career preparation plans.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Make diagrams having:
    a. The location of all the teeth, and their correct dental names
    b. "Baby" teeth and the ages at which they usually appear

    and disappear
   c. Permanent teeth and the ages at which they usually appear
2. Prepare a display of x-rays of teeth. Identify some of the problems.
3. Carve a tooth, or a set of teeth, from a bar of Ivory, or other soft soap.
4. Prepare a report on the care of the teeth and mouth. Include personal care and professional care. Decide on the form in which the report is to be presented--an oral, written, or taped report, poster, scrapbook, panel discussion, etc.
5. Visit a school counselor to find out what aids are available to help finance education for a dental occupation and what courses to take in high school in preparation for a dental career.
6. Role play a visit to a dentist's office. Show the dentist trying to convince a patient of the importance of good home dental health care, and teaching the patient proper dental care.
7. Compare modern dental treatment with that fifty years ago. Interview older persons about their recollections of earlier treatment and comparison with recent treatment.
8. Research changes and developments in dentistry tools, dentures, home mouth care products such as toothbrushes, toothpastes, powders, polishes, denture creams, mouth washes, chewing gum.
9. Find out about the dental treatment of some historical persons such as George Washington and Benjamin Franklin.
10. Prepare a display of advertisements for mouth care products. Evaluate the claims of the advertisements.
11. Prepare a display of different kinds of toothbrushes and dentifrices.
12. Prepare a presentation on tooth fillings and extractions. Include procedures, materials, and tools.

Activity B-4

Dental Terminology

1. Adsorption--the attachment of one substance to the surface of another.
2. Amalgam--an alloy of two or more metals, one of which is mercury.
3. Antibiotic--a chemical substance produced by microorganisms which are used in the treatment of infectious disease in humans, animals and plants to destroy or prevent the growth of bacteria.
4. Articulation--the place where two or more bones of the skeleton unite.
5. Autoclave--An apparatus that sterilizes equipment by a high temperature that is caused by steam under pressure.
6. Calcification--the process by which organic tissue is hardened through a deposit of calcium salts within the tissue.
7. Caries--a progressive destruction of bone or tooth; results in a cavity.
8. Decalcification--process by which calcium salts and other inorganic substances are removed.
9. Dentition--the development and cutting of teeth; the size and arrangement of teeth.
10. Denture--partial or complete; fixed or removable replacement of natural teeth; a set of false teeth.
11. Detritus --debris which sticks to tooth surfaces.
12. Endodontics--a branch of dentistry concerned with the cause, diagnosis and treatment of diseases of the dental pulp.
13. Fluoridation--the application of fluoride to the surfaces of the teeth to help prevent tooth decay.
14. Glossitis--inflammation of the tongue.
15. Halitosis--offensive or bad breath.
16. Hygiene--the science which deals with the preservation of health.
17. Macroglossia--enlargement of the tongue
18. Masticate--to chew in preparation for swallowing.
19. Nutritional anemia--deficiency in the blood due to poor diet.
20. Oral surgery--the dental specialty which includes all of the surgical diseases, injuries and developmental abnormalities of the mouth and jaws.
21. Orthodontics--the dental specialty which works to prevent and/or correct dental and oral irregularities.
22. Pedodontics--the dental specialty concerned with the causes, diagnosis, and treatment of diseases of children's teeth.
23. Periodontium--the tissues which surround, support and are attached to the teeth.
24. Supernumerary tooth--an extra tooth; more than the normal number of teeth.
25. Virulent--capable of causing infection or disease.

Activity B-5

A MATCHING GAME

TASKS I ENJOY	ENVIRONMENT I PREFER
	(Indoors/outdoors, with people/alone, classroom/business, country/city.)

Possible occupations which fit the tasks and environment I prefer:

Applied Biological and Agriculture	Business, Marketing, Management	Health	Industrial	Personal and Public Services

3

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

NURSING OCCUPATIONS

PREFACE

Do you keep your head and remain calm in an emergency? Are you unruffled when other people are irritable? Can you work well with a team, both taking and giving instructions? Nursing personnel need these special personal characteristics in addition to a warm, caring attitude and a desire to work with people who are often at their worst during times of illness, accident, or other trouble.

The nursing field consists of registered nurses, licensed practical nurses, and nurse aides or assistants. Registered nurses provide direct patient care, patient education, coordination of nursing services and patient advocacy. Licensed practical nurses work under the supervision of doctors and/or registered nurses to provide skilled nursing care. Nurse aides work under the direction of a qualified nursing staff.

Many jobs are in hospitals, nursing homes, private homes, doctors' offices, schools and industries. Occupational growth is expected to increase because of growing population, including a larger proportion of elderly people; the increasing ability of people to pay for health care; the growth of public and private health insurance; and the increased interest in preventive medicine and rehabilitation of the handicapped.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Groups outside of school influence an individual's personal development.
2. Performance requirements for a job may change with time.
3. Occupations require special personal characteristics.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on history of nursing, on psychology and sociology to understand human behavior, and self-concept.
2. Science - Units on human physiology, scientific terminology, tools and techniques of schience, and properties and behavior of matter.
3. Health - Units on emotions and personality, personal hygiene, public health, and first aid.
4. Home Economics - Units on nutrition, personal relations, personal appearance, and child care.

C. OCCUPATIONS

Registered nurse:
- Industrial nurse
- School nurse
- Psychiatric nurse
- Clinician
- Public health nurse
- Primary care nurse
- Medical-surgical nurse
- Nurse-midwife
- Nurse anesthetist

Licensed practical nurse
Nurse aide or assistant
Home health aide

II. TEACHING STRATEGIES

A. GOALS

1. To identify individuals and groups outside of school who influence one's personal development.
2. To identify special personal characteristics needed in nursing occupations.
3. To explain how the duties required of a nurse may change over a period of time.
4. To explore occupations in NURSING.

B. INTRODUCTORY ACTIVITIES

1. Show slides or a film of people at work in different kinds of nursing occupations
2. Invite a public health nurse, a hospital nurse, a doctor's office nurse, and a school nurse to visit the class and discuss how their training and the activities they perform on their jobs are similar and dissimilar.
3. Brainstorm in class and list on the chalkboard the special personal characteristics expected of persons in nursing occupations. Make a copy of the list for later use.
4. Instruct students to ask their parents how they decided on the occupations they now have, and specifically, how they were influenced by individuals and groups outside of school. Discuss these findings in class sometime before the end of this unit.

C. INDIVIDUAL AND/OR GROUP ACTIVITIES

1. Construct two diagrams, one showing a variety of nursing occupations, from nurse aide to nurse anesthetist, and the other showing one nursing occupation which may be performed in various settings, e.g., a registered nurse in a hospital, a school, a doctor's office, an industry or public health, etc.
2. Choose one of the nursing occupations and talk over the possibilities of entering that occupation with: a. Your parents; b. your closest friends; c. a group to which you belong such as Boy or Girl Scouts, 4-H, a church youth group, or any other group of people with whom you meet regularly. How did each group respond to the possibility? How did you feel about your choice before and after talking with each group?
3. Prepare a brief report on the history of nursing to be presented to the class. Choose a form for presenting the report which you think will be most effective.
4. Choose one of the nursing occupations, and interview a worker in that occupation about the special personal characteristics needed in order to be successful, how the duties have changed, and projected future changes.
5. On a list of the special personal characteristics identified by the class in the introductory activities, check those that you believe you have. Describe how you would use them in a nursing occupation.

6. Interview a nurse in a doctor's office and find out how nursing duties have changed. What things does the nurse do now that were not previously required, and what activities are no longer done that used to be done? Present the information to the class in a form of your choice.
7. Role play a nurse teaching a parent about the right kind of foods to feed a one-year old child.
8. Write a letter to a director of a nursing school to find out about men entering nurse's training and what employment opportunities there are for male nurses.
9. Choose a nursing occupation which interests you and seems to match your abilities. Describe the preparation required, the duties performed on the job, and the salary and other rewards.
10. Read a biography of a nurse who worked generations ago. Compare the duties performed then with duties performed by nurses today, e.g., Clara Maass, Florence Nightingale, Clara Barton, Sister Kenney, Edith Cavell, Lillian D. Wald.

4

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

HEALTH AND MEDICAL RESEARCH AND COMMUNICATIONS

PREFACE

Do you know who Dr. Salk and Dr. Sabin are? They discovered polio vaccines that have prevented the crippling and death of thousands of persons. Research scientists have made many discoveries which have had far-reaching benefits to humankind. Drugs and vaccines, as well as equipment such as electrical devices for monitoring the heart and circulatory systems, and apparatus for the handicapped are all products of health and medical researchers. Funding of research projects is usually in the form of research grants which can fluctuate in quantity and level of funding.

Medical centers and pharmaceutical houses employ researchers whose findings must undergo long periods of testing for safety and effectiveness. Once the long hours, days, even years of work have produced the new discoveries, medical illustrators, photographers, and writers prepare materials for journals, newspapers, magazines, and books.

All of these workers need a strong background in science with additional training in their own specific area such as a particular research area, technical writing, or photography. Learning must continue throughout their career lifetimes so that they can utilize the newest developments.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Work is a means of gaining social rewards.
2. Occupations require the use of specific materials and equipment.
3. Learning is a lifelong process.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on use of laboratory equipment, performing experiments, and writing research reports, use of library resources, and writing health education materials.
2. Art - Unit on illustrating.
3. Health - Unit on health education.
4. Language Arts - Unit on technical writing.

C. OCCUPATIONS

Medical illustrator
Research scientist
Technical writer
Hospital public relations director
Medical photographer
Science writer
Health information specialist
Laboratory assistant
Drug representative

or the hospital. For drugs, prepare a report on how the drug was developed and tested. For equipment, prepare drawings.

3. Have a student committee prepare a slide presentation of people at work in health and medical research and communications occupations.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Write a newspaper article on the school vision and hearing testing. Interview the nurse in charge of the program. Find out why and how the testing is done. Be specific in describing the equipment and how it is used. Describe the results of the testing and what follow-up is done for students who are discovered to have vision or hearing problems.
2. Prepare an illustration of the human eye or ear and label the parts.
3. Prepare a scrapbook of newspaper and magazine articles about new developments in medical research.
4. Read a biography of a medical researcher and give a report to the class, including information on why the researcher chose this career, training, required work locations, what is done on the job in the laboratory activities, and some of the frustrations and rewards.
5. Interview, and visit in the laboratory if possible, a medical researcher. Present a report to the class in the form of an oral, written,or taped report.
6. Ask an older person to recall the polio epidemics of the late 1940's and the early 1950's. What was the reaction of people when polio vaccine was discovered?
7. Conduct a research activity in class using the scientific research method. Ask students: (1) The number of years each one has been a milk-drinker, and (2) Whether anyone has ever had any broken bones. Does this research show any correlation in this class between drinking milk and having broken bones? What conclusions can be drawn? Is additional research needed for validity of conclusions?
8. Take four pieces of bread. Put one in a small plastic bag, tie securely,and place in a freezer. Place the second piece, unwrapped, in the freezer. Place the third one, wrapped, on a plate in the classroom. Put the fourth one in a small plastic bag, add a few drops of water, tie securely,and place in a warm spot at home or in the classroom. Observe for several days. What conclusions may you draw from the changes or lack of changes you observed?
9. Write a one-page paper on the ways in which society may reward a research scientist who has found a cure for the common cold.

II. TEACHING STRATEGIES

A. GOALS

1. To demonstrate familiarity with laboratory equipment and materials.
2. To list the seven steps in the research method.
3. To describe ways in which society might reward a research scientist for a discovery.
4. To describe why it is important to keep on learning during one's lifetime.
5. To list some of the ways in which people keep on learning.
6. To explore occupations in HEALTH AND MEDICAL RESEARCH AND COMMUNICATIONS.

B. INTRODUCTORY ACTIVITIES

1. Ask students what steps they think are necessary in conducting scientific research. Relate these to the basic seven steps of the research method. Discuss some possible health-related experiments small groups of students may conduct, e.g., number of students with normal sight or number of people who eat a nutritious breakfast.

   Seven steps in the research method:
   a. Define the problem
   b. Collect all information
   c. Form a hypothesis
   d. Experiment to prove or disprove the hypothesis
   e. Record the data
   f. Examine the results
   g. Draw a conclusion

   Sample steps for class research:
   a. Find out what percentage of the class has normal vision
   b. Ask students for an opinion
   c. Form a hypothesis (scientific guess)
   d. Select a method to test the hypothesis, such as the Snelling eye test
   e. Administer the test and record the data
   f. Examine the data and figure the percentage of persons with normal vision
   g. Compare test results with hypothesis
   h. Have the class draw a conclusion
   i. Discuss what other information could be gathered
   j. Discuss what other hypothesis could be formed
2. Discuss with students the role of a researcher and the characteristics needed, such as curiosity, a creative imagination, and skills to translate new ideas into concrete reality. Ask each student to identify a medical problem, such as obesity, an illness, or a physical deficiency and think of a new way of curing or preventing it. This may be in the form of drugs or new equipment for use in the home, the doctor's office,

5

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

PHYSICAL, MENTAL AND SOCIAL REHABILITATION

PREFACE

In order to restore a sick or injured person to as healthy a condition as possible, the physician may refer the patient to one or more other workers. These persons work with the physician to make up a team which coordinates services to the patient. Each worker has a background in science and health, and then has additional training in a special field. While all work as part of a team, some of the services may be provided by persons in private business and others by institutions such as hospitals, nursing homes or mental health centers. Psychologists, for example, may be employed by a mental health center or may have a private practice. Physical, occupational, respiratory, and recreational therapists are usually employed by hospitals, nursing homes, or clinics. Orthotists and prosthetists usually are employed by private business. Speech pathologists and audiologists make up the largest group of rehabilitation workers and work primarily in public schools, but they may also work in hospitals, clinics, research centers, and private practice.

Employment in this field is expected to grow due to public interest in rehabilitation of disabled persons and the success of established therapy programs. The growing number of nursing homes which provide therapeutic services to the elderly is expected to further increase the need for workers in this area.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.
2. Lifestyles within a community differ.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on psychology and sociology on understanding human behavior and the influence of society on individuals.
2. Physical Education - Unit on physical fitness and exercises to strengthen body function.
3. Art - Unit on art as therapy.
4. Music - Unit on music as therapy.

C. OCCUPATIONS

Art therapist
Music therapist
Occupational therapy assistant
Peripathologist (mobility instructor)
Physical therapy assistant
Recreational therapist
Geriatric activity director
Thanatologist
Psychiatric aide
Psychiatric social worker
Speech pathologist
Audiometric assistant
Dance therapist
Occupational therapist
Orthotist
Orthotic--prosthetic assistant (or technician)
Physical therapist
Prosthetist
Respiratory therapist
Rehabilitation aide
Psychologist
Medical social worker
Social work aide
Audiologist
Teachers of the deaf, blind, etc.

II. TEACHING STRATEGIES

A. GOALS

1. To identify the different kinds of emotions an individual may have.
2. To compare and contrast life styles as related to occupations.
3. To explore occupations in PHYSICAL, MENTAL AND SOCIAL REHABILITATION.

B. INTRODUCTORY ACTIVITIES

1. Invite workers from a mental health clinic who specialize in helping adolescents, to visit the class and discuss their jobs.
2. Role play a family situation. (See supplement at end of unit.) Ask role players to read the situation first and take a little time to think about how they are going to feel, think, and act as the persons they are portraying. Explain the situation to the class, and then have role players discuss father's announcement. Allow about ten minutes for the role play. Then in a class discussion identify and list on the chalkboard the different emotions displayed by the actors. Discuss how family members affect the parents' career decision making.
3. Select four or five different occupations of interest to the class. Identify the physical, mental, and social aspects of the job. Discuss how these aspects affect the lifestyle of the worker. Discuss factors which would require the services of the rehabilitation worker. (See supplement at end of unit.)
4. Identify in small group discussions some of the principles that affect the work of rehabilitation workers. For example, consider: a psychologist who does not keep confidential what the client says; a prosthetist who hurries through an assignment, not taking care to see that an appliance fits properly and works well; a physical therapy assistant who forgets to turn off at the proper time a machine on which a patient is working.
5. Have students group themselves in small groups of four or five, study the activities, decide how many activities to do in this unit,and what tasks each group member will perform. Plan for group meetings to assess progress toward completion of the group goal, and to provide aid to group members in meeting their individual goals.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a report on therapy prescribed for a person who broke a wrist.
2. Prepare a puppet show of a physical therapist working with a student who fell and broke an elbow.
3. Plan and present a debate on whether a student who is having difficulty either in or out of school should see a psychologist.
4. Discuss in a small group the list of emotions identified in the role-playing situation. Are the emotions common to most

students at some time or other? Are there times when emotions must be controlled or managed in some way? What are some effective ways of dealing with sadness, anger, fear, loneliness? How can one manage to have more positive emotions such as satisfaction, cheerfulness, gratitude, appreciation, pride in something well done? How do one's feelings affect job performance?

5. Visit a nursing home. Observe the rehabilitation activities that are going on. Interview the nursing home director and the activities director. Inquire about how they became interested in their jobs, what their training involved, what they do on the job, what frustrations and rewards they have, what kind of help they would like to have, and what students might do to help. On returning to class, discuss whether some of the students would like to help in the nursing home. If so, plan and carry out activities in conjunction with the activities director or the nursing home director.
6. Meet with the school counselor to find out if there is a big brother-big sister program to help newcomers to the school. Volunteer to help organize one.
7. Ask a willing hearing-disabled student to be interviewed as to what it is like to have a hearing disability. Seek permission from that student to be interviewed before the class, or to have information from a private interview presented to the class.
8. Interview the school speech and hearing therapist. Tape the interview for class presentation.
9. Prepare a scrapbook on one of the rehabilitation occupations. Include information on training (costs, amount of time, and places of training), personal qualities, abilities, interests and values needed, salaries on entry into occupation and after some years of experience and advanced training, job activities, frustrations and rewards, and possible lifestyles.
10. Get an audiogram from the speech and hearing therapist along with an explanation about its use. Prepare a transparency for use on an overhead projector and make a class presentation.
11. Visit an occupational therapist. Choose an activity this therapist uses with clients, get the necessary materials and information, and teach a small group of students how to perfrom this activity.
12. Demonstrate how art and/or music may be used as therapy.
13. Present to the class in the form of posters, scrapbook, oral, written, or taped, a report on the emotions identified by the the class. Show how to deal with those that can create problems, and how to manage to have more of those that create happiness.
14. Prepare and present to the class slides of different rehabilitation workers on their jobs.

Activity B-1

ROLE-PLAY SITUATION

In a family of four people there is a father, mother, 14-year old daughter,and 11-year old son. Father is manager of a local branch of a large industry. Mother finished her bachelor's degree in college after the children were both in school and has recently taken a job that she likes very much. Anne, the daughter, is a freshman in high school and was elected to the cheerleading team for the first time right after school started. Anne has always been a quiet girl, and her activities have been family-related. She has made friends with other cheerleaders and she and one of the sophmore basketball players have been going to school activities together. Jerry, the son, is in sixth grade. He sometimes gets into trouble at school because he talks and teases too much, doesn't get his work done, and keeps other students from working. When he does work, it is usually well done. Jerry has a lot of friends and sometimes thinks that he gets into trouble because of them.

On an evening in late January the family has just started to eat dinner. Right after dinner Anne has a cheerleading meeting, Jerry is going to a friend's house, Mother is going to play bridge and Father is going bowling. Father puts down his fork and says, "I got some really exciting news today at the office. I've been promoted to vice-president in the company. This is a promotion I've really been hoping for. It does mean though that we will be moving across the country."

Activity B-3

OCCUPATION	Physical Requirements	Mental Requirements	Social Requirements	EFFECTS ON LIFESTYLE

6

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

CLINICAL LABORATORY AND RELATED TECHNICAL

PREFACE

Do you look forward to the days in school when you are going to have laboratory experiments in science? Do you feel satisfaction in writing up a report on an experiment you have done? If this report identified for a physician an illness of a patient so that proper treatment could be instituted, how would you feel? What if there were no cure for the illness identified?

Some clinical laboratory and related technical workers run tests on various specimens from patients or take x-ray pictures to identify the state of health of those patients. These workers may also provide treatment for patients under the physician's orders. Other workers, such as the biomedical engineer, apply learnings and technology from physical sciences and other fields to solve problems in medicine and life sciences. They provide help to patients indirectly by supplying physicians, therapists, and nurses with machines or other materials or information that assist in giving the care and services to patients.

Science and math background are needed in these occupations, plus education and/or on-job training in specialized areas. Employment in this field is expected to grow as wide use is made of laboratory tests in routine physical check-ups and in the diagnosis and treatment of disease.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. The school can provide an opportunity to enhance self-development.
2. Skills and knowledges in subject areas are helpful in occupational competence.
3. Occupations may have certain dress requirements.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on metric measurement, storage, care, and use of chemicals, preparation of slides, care and use of laboratory equipment, and safety and asepsis in the lab, including appropriate lab clothing and protective devices.
2. Home Economics - Units on foods and textiles as related to allergies.
3. Health - Units on personal health.
4. Mathematics - Units on measurements, graphs, and reading of technical instruments.

C. OCCUPATIONS

Electrocardiograph technician
Electroencephalographic technician
Medical assistant
Medical laboratory technician
Medical technologist
Medical laboratory assistant
Medical record technician/clerk
Operating room technician
Optometric assistant
Radiologic (x-ray) technologist
Respiratory therapist
Registered medical technologist
Blood Bank technologist
Certified laboratory assistant
Dialysis assistant
Histologic technician
Radiation therapy technologist
Cytotechnologist
Pathologist
Radiologist
Biochemist
Biophysicist
Biomedical engineer

II. TEACHING STRATEGIES

A. GOALS

1. To describe appropriate wearing apparel for clinical laboratory and related technical occupations.
2. To identify skills and knowledge taught in school subject areas which are helpful in laboratory occupations.
3. To list ways in which self-development may be enhanced in school.
4. To explore CLINICAL LABORATORY AND RELATED TECHNICAL occupations.

B. INTRODUCTORY ACTIVITIES

1. List on the chalkboard occupations in which workers wear uniforms or other special kinds of clothing. Emphasize the health occupations. Discuss reasons for use of special clothing.
2. Take interested students on a field trip to a hospital or clinic where laboratory work is done. Encourage students to be aware of sights, sounds, and smells. They may take pictures and record their experiences for presentation to the rest of the class.
3. Invite two workers to visit the class, one of whom has an advanced professional degree and the other one who has minimum classroom and/or on-job training. Visits may be made together or at separate times. Ask visitors to describe training, work on the job, uniforms if any, rewards, and how skills and knowledges learned in school help.
4. Discuss the ways in which school helps students in relation to their interests, values, and abilities, and how their career choice may be affected, or if it hasn't, why not? Emphasize the effect of career-oriented programs, K-12.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Divide students into small groups. Let each group choose a different school subject and (a) identify the skills and knowledges in that subject area that are helpful in occupational competence, (b) identify ways in which the school can enhance self-development of students.
2. Choose an occupation in this unit that is unfamiliar to you. Prepare a report on it for presentation to the class.
3. Prepare slides using samples of blood, scraping of skin, cough droplets, and/or hair to study under a microscope. Prepare a report to a doctor on what you observed. Exercise necessary precautions in getting samples to use.
4. Prepare an exhibit on different kinds of allergies, showing what causes an allergy, what the allergic reactions are, how the allergy to a specific substance is discovered, and treatment.
5. Prepare a bulletin board display showing laboratory and technical workers dressed in the uniforms they wear on the job.
6. Visit the school counselor to discuss how you are getting along in your school subjects, how you can use the school to

enhance your self-development, and whether what you are learning about yourself indicates the possibility of success in a clinical laboratory or related technical occupation.

7. Prepare a case history. Write a report about a patient, describe the doctor's referral and the laboratory workers who will help diagnose and treat the illness.
8. Interview in class or on tape someone who works in the blood bank drives. Ask about the work that person does and the value of the blood bank.
9. Identify other kinds of banks, such as eye or kidney banks and describe the work of people employed in those areas.
10. Use the list of occupations developed in Introductory Activity B-1, and describe some of the tasks performed. Clarify with illustrations where necessary.

7

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

ENVIRONMENTAL AND PUBLIC HEALTH

PREFACE

Can you see smokestacks belching out great clouds of black smoke in your community? Is community garbage dumped in an open area and allowed to rot? Do you always have to boil your drinking water? Have there been widespread epidemics of serious disease in your community? If not, it is probably due to the efforts of environmental and public health workers. If there are some of these problems, it is highly probable that environmental and public health workers are trying to correct them. Community health depends on control of these problems.

Environmental and public health occupations have two main emphases: The prevention of disease, and the early detection of disease to minimize its seriousness. Prevention of disease is aided by immunization of individuals and by environmental sanitation, e.g., pure water supplies, correct sewage disposal, and regulation of industries and individuals to prevent or control air, water,and/or noise pollution. As the public becomes more concerned with the total environment, more workers will be needed to prevent and control those community problems.

Early detection is done through screening programs, for example vision, hearing.and dental screening in schools. Early treatment is instituted when disease is detected to cure, if possible, or to minimize damaging effects.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Moral principles are an integral part on one's work life.
2. Changes in individuals influence the environment and changes in environment influence individuals.
3. An individual should learn to cope with the rights and feelings of others.

B. SUBJECT MATTER AREA RELATIONSHIP

1. Health - Units on public health and safety.
2. Science - Units on environmental health.
3. Social Studies - Units on relationships between people and their environments.

C. OCCUPATIONS

Environmental health technician
Systems safety analyst
Health physicist
Toxicologist
Entomologist
Industrial waste inspector
Air analyst
Food and drug inspector
Public health bacteriologist
Industrial hygienist
Sanitarian
Radiation monitor
Public health inspector
Industrial audiologist
Public health bacteriologist
Water tender
Waste-treatment operator
Microbiologist (food)
Exterminator

II. TEACHING STRATEGIES

A. GOALS

1. To describe how one's moral principles are a part of one's work life.
2. To describe how changes in individuals influence the environment.
3. To describe how changes in the environment influence the individual.
4. To identify reasons why an indivudual should learn to cope with the rights and feelings of others.
5. To explore occupations in ENVIRONMENTAL AND PUBLIC HEALTH.

B. INTRODUCTORY ACTIVITIES

1. Discuss in class what health rules and regulations govern the operation of restaurants. What might happen if there were no rules and regulations or if people disregarded the rules?
2. Invite the manager of the community sewage disposal system to explain to the class the job preparation, duties, etc., and how the community is dependent on that job.
3. List on the chalkboard as students identify them, local public health measures taken to prevent the start or spread of disease in your community. Discuss the occupations of persons directly and indirectly involved, such as mayor, city council, sanitarian, public health inspector, operators of various kinds of equipment, and concerned citizens who call attention to potential health hazards. What would happen if some workers compromised their moral principles?
4. Discuss the trust people feel in buying a carton of milk. What steps were taken to ensure the purity of the milk from cow to store? What should the consumer do to protect the milk from the store to its consumption? What moral principles are involved for the worker?
5. Discuss government roles in health, e.g., air pollution control and Food and Drug Administration monitoring. What personal responsibilities do individuals have concerning smoking, overeating, noise (loud music) and littering?
6. Discuss: a. How the environment around home would change if individuals who never picked up after themselves assumed that responsibility and also began helping with other tasks. b. How moving from a rural home to a city, or from an individual residence to an apartment building, or vice versa, would change the individual.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Study the zoning regulations for your community. How would those regulations affect you if you wanted to: (choose one or more)
    a. Build a 12-unit apartment building
    b. Start a junkyard business

   c. Operate a landfill
   d. Build and operate a coal-gasification plant
   e. Open a discotheque
2. Prepare a scrapbook of articles from newspapers and magazines, and summaries of TV and radio newscasts on local, state, and federal reaction to an impending epidemic or other major public health problem. What is being done about it?
3. Prepare a panel discussion on the following situation: Assume that there is in your community a large old house, now vacant, standing on a weed-covered lot. Some of the windows are broken, the doors stand partly open, some of the steps in the stairway to the second floor are missing. The last residents left garbage and trash scattered about in the house and yard. What are the implications of this for the community? What could be done about it? Could this kind of situation be prevented? If so, how?
4. Describe the consequences to you and to others of the following situation: Monday and Tuesday you don't feel well, you have a sore throat and think you might have a little fever, but you go to school anyway. Wednesday morning you discover you are covered with red spots. The doctor says measles.
5. Prepare a poster showing how some of the communicable diseases are transmitted, the treatment of them and how they might be prevented.
6. Make a display of household pests--insects, rodents, etc. Prepare a chart to go with the display showing how to rid a house of those pests, and ways of preventing their infestation.
7. Visit the water plant and find out where the water comes from, how it is treated, how it is distributed to the community and the regulations concerning public health.
8. Plan and present a debate on: Resolved: Burning of trash and leaves should be against the law.
9. Prepare a report on encephalitis (sleeping sickness) telling how the disease is transmitted, how it affects people, what the treatment is for it, and what steps are taken to prevent it.
10. Present a panel discussion on the challenges to be faced in preventive health care, e.g., smoking, alcoholism, drug abuse, occupational hazards in newly developing industries, education and motivation of the public to practice good health care.
11. Talk to an entomologist or exterminator to find out how pests react to pesticides. Does a new strain of the pests develop that is resistant to the pesticide? Do people develop resistance to medications? Do new diseases develop for which treatment has not yet been identified? Are new hazards in the environment developing which affect the health and welfare of people? What kinds of jobs would be involved in dealing with these problems?

8

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

ADMINISTRATIVE, BUSINESS AND CLERICAL

PREFACE

What steps would you, as a patient, take to be admitted to the hospital? How do you go about getting your health insurance company to pay your hospital bill? If you move to another town, how would your new doctor get information about your health history? Administrative, business,and clerical workers in hospitals, nursing homes, clinics, doctors' offices,and insurance companies take care of these details.

One of the most important qualifications for these jobs is the ability to keep all information about patients confidential. In addition, training in certain business office skills is needed, depending on the particular job one wants. The cashier, accountant, and computer operator need knowledge of mathematics, accounting, and statistics. A basic science background is helpful in all these jobs. The level of education required ranges from high school graduation to one or two years of junior college, correspondence school, or on-job training, to four years of college, and one or more years of graduate school Employment in this area is expected to grow as the quality and quantity of patient services increase, as hospital management becomes more complex, as more people use health insurance, and as more medical information is recorded.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual's decisions affect self and others.
2. Performance requirements for a job vary with the work setting.
3. All workers require skills to search for, locate, and obtain career placement on an initial basis and for advancement.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on scientific terminology, human anatomy,and writing.
2. Mathematics - Units on basic operations.
3. Business - Units on typing, bookkeeping, and records.
4. Health - Units on personal health.

C. OCCUPATIONS

Hospital administrator
Assistant admitting officer
Hospital purchasing agent
Clerk
Medical assistant (administrative and clinical)
Hospital cashier
Central supply clerk
Medical librarian
Medical transcriptionist
Executive housekeeper
Out-patient admitting clerk
Admitting officer
Hospital accountant
Computer operator
Director of volunteer services
Medical secretary
Ward clerk secretary
Storekeeper
Medical records administrator
Medical record technician
Hospital food service administrator

II. TEACHING STRATEGIES

A. GOALS

1. To demonstrate an understanding that an individual's decisions affect oneself and others.
2. To describe how one searches for, locates, and obtains a job and then advances in that job.
3. To explain ways in which performance requirements for a job vary with the work setting.
4. To explore ADMINISTRATIVE, BUSINESS AND CLERICAL occupations.

B. INTRODUCTORY ACTIVITIES

1. Invite a medical secretary and a school secretary to visit the class to compare and contrast their jobs and the preparation needed for their jobs.
2. Invite the counselor or member of an employment agency to participate in a discussion of what one needs to do to get a job and to advance in it. Discuss decisions to be made and their effects.
3. Secure from a local hospital, store, school, and industry, copies of the codes of ethics and the rules for employees. Give students copies and discuss reasons for the code and the rules. Discuss similarities and dissimilarities.
4. Invite the administrators of a hospital and/or a nursing home to visit the class to explain their jobs, preparations for the job, duties performed, rewards, and frustrations. Inasmuch as administrative responsibilities include decision making, help students plan ahead of time questions to ask about the effects of decision making on the administrator and on hospital employees and patients.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Role play for the class two ways of applying for a job as a medical librarian. Have the class vote on the way most likely to get the job. In planning for the role play take into consideration whether the applicant has training in library science and medical science, kind of clothing worn for the interview, personal grooming, courtesy, confidential nature of the job, experience on other jobs, absenteeism and tardiness in school or previous jobs, state of health, degree of interest in the job, and ways in which interviewer's questions are answered.
2. Prepare a puppet show in which a nurse anesthetist is asking the hospital administrator to buy a new piece of equipment for monitoring the condition of patients in surgery. Part of the administrator's job is to spend money wisely and carefully. What is the effect of the decision that is made on the administrator and on others?
3. Make an appointment to visit the hospital administrator in the hospital office. Ask for an organization chart of hospital

occupations. Ask for a tour of those parts of the hospital available to you to observe the employees at work. Take pictures. Prepare a bulletin board showing the organization chart and pictures of people at work in the jobs identified on the chart.

4. Make a collection of the various kinds of forms used in a hospital: Admissions, patient bills, dietary orders, prescription blanks, medical record, patient care record card, operation consent, anesthesia record, progress of operation and patient during surgery, operative procedures performed, surgical pathology, postoperative record, vital signs sheet, intake and output record. Decide how to present these most effectively to the class.
5. Find out what volunteer services are available in your local hospital. Describe what the director of volunteer services does to facilitate these services.
6. Prepare a card catalog of occupations in this unit. List briefly the training, experience, and personal qualities required, duties performed, salaries of beginning and experienced workers, and employee benefits. File alphabetically.
7. Role play a ward clerk in a conversation with a friend who is asking all kinds of questions about patients in the hospital.
8. Visit a placement center or the state employment service to become acquainted with services.
9. Visit the library and/or guidance office to become acquainted with materials and services.
10. Explain how a secretarial job is different in a school than in a hospital.

9

OCCUPATIONAL CLUSTER
HEALTH OCCUPATIONS

RELATED HEALTH SPECIALTIES

PREFACE

How many of the health occupations you know about did not exist fifty years ago? How many of them will not exist fifty years from now? What new ones will there be? How does this affect you now?

If you are interested in a health occupation, you must consider the answers to those questions, and be prepared to make changes in your career plans. The basic learnings in science, mathematics, health, social studies, home economics,and the other courses you take through high school will give you the necessary background for more advanced study as society changes and new discoveries are made. It will help in any occupation if you are able to get along well with other people, those who are interested in the work and recreation in which you are interested, as well as those who have different interests. It is also important to recognize and accept the fact that society is dependent on the work of productive individuals; that individuals are important to society, and society is important to individuals.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Relationships exist between a person's occupation and the people with whom a person tends to associate.
2. A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.
3. Society is dependent upon the work of productive individuals.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on scientific terminology, metric measurement, basic science skills.
2. Home Economics - Units on nutrition and preparation of diets.
3. Health - Units on personal health.

C. OCCUPATIONS

Emergency medical technician
Optometrist
Pharmacist
Pharmacy support worker
Dietetic assistant
    (or technician)
Optician
Optometrist assistant
    (or technician)
Dietician
Nutritionist
Cardiovascular technician

II. TEACHING STRATEGIES

A. GOALS

1. To identify the people with whom workers tend to associate.
2. To explain how health workers, as members of a team, must use their specific skills and knowledge and take into consideration the skills and knowledge of other workers in making decisions on patient care.
3. To demonstrate how society is dependent on workers in health occupations.
4. To explore occupations in RELATED HEALTH SPECIALTIES.

B. INTRODUCTORY ACTIVITIES

1. Ask a student who wears glasses or contact lenses, and who has indicated ahead of time willingness to participate, to read something on the chalkboard or in a book with and without the corrective lenses. Discuss the importance of the role of eye-care workers to society.
2. Invite a nutritionist or a dietician to visit the class to discuss job tasks, preparation, etc. Ask students to prepare in advance questions about diet for pre-adolescents and adolescents.
3. Brainstorm ideas on changes in health care services. What are some newly developing jobs, e.g., physician's assistant, primary care nurse? What effects do changes in society have on health care services, e.g., interplanetary travel? What are some new discoveries that will affect health care services?
4. Discuss in class what the community would be like: (a) without any health workers; (b) if available health workers would not cooperate in the care of patients.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Role play a physician, nurse, physical therapist and pharmacist consulting about the course of treatment for a patient with a broken leg. It will be necessary to write a case history first so each of the health workers will have information on which to base decisions: Age of the patient, availability and quality of home care, means of transportation to school or work, sensitivity to pain, allergies, etc.
2. Prepare a report on a local health problem of your choosing e.g., an accident, an epidemic, a breakdown in the water treatment system, etc. Show what would happen (a) if there were no health services available (b) if there were good public health and hospital services. Decide how to present the report most effectively to the class.
3. Visit a pharmacist in a hospital and another in a retail store. Compare and contrast their jobs and preparation for their jobs. Compare and contrast their jobs now with those fifty years ago. What changes do they expect in the next fifty years?

4. Interview some of the workers identified in this unit to find out if the persons associated with, both on and off the job, bear a relationship to their occupations. Or, interview some of your teachers to find out if their friends are also teachers.
5. Plan a menu for a week for a patient who must have a salt-free diet.
6. Identify your friends for the past two years. List your common interests. Friendships change, sometimes because of lessened contact--maybe you are not in the same classes any more. Write a short essay describing how friendships can change. Identify what happened and factors which may reverse or continue the status of the friendship.
7. Find out if any of the athletic team members wear glasses, and whether they need special glasses for athletic activities. Ask the industrial arts teacher about the use of safety glasses. What other occupations need protective eye-wear?

OCCUPATIONAL CLUSTER

"D"

INDUSTRIAL ORIENTED

TABLE OF CONTENTS

Industrial Oriented Occupations Units

1. Construction Trades - Builders 193
2. Construction Trades - Finishers 197
3. Extraction of Raw Materials 201
4. Manufacturing and Production 205
5. Maintenance, Service and Repair 209
6. Communications - Graphic 213
7. Communications - Electronic 217
8. Electronics and Instrumentation 221
9. Energy and Power 225

1

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

CONSTRUCTION TRADES

BUILDERS

PREFACE

Do you find yourself drawn to construction sites? Do you find beauty in the skeleton of a skyscraper or the arch of a bridge? Perhaps you find yourself drawing sketches of houses or asking questions about how a building is put together. Maybe you are one of those individuals who has already constructed a tree house or dog house. These interests coupled with talent and a desire to learn may bring you into the building industry.

The building industry includes: General building contractors who build every type of building except homes; home building contractors who build homes; heavy construction contractors who build bridges, tunnels, airports, dams, etc.; highway construction contractors who do road work; and special trade contractors who do work in only one trade such as carpentry, electricity or plumbing.

Economic factors, which include mortgage money, interest rates, material costs, strikes, and bad weather greatly affect the amount of work to be done in a construction season. However, workers on the job say financial rewards, freedom from monotony, and job satisfaction add up to good reasons for becoming a member of a construction team.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual is influenced by economic forces.
2. All occupations require general and specific skills.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on physical science.
2. Mathematics - Units on measuring and on algebraic computation.
3. Industrial Arts - Units on construction.

C. OCCUPATIONS

Building
- Carpenter
- Ornamental iron worker
- Bricklayer
- Cement mason
- Laborer
- Tile setter
- Contractor
- Architect
- Surveyor
- Topographer
- Riveter
- Operating engineer (bulldozer, crane, trencher, derrick)
- Structural iron worker
- Stone mason
- Hod carrier
- Engineer
- Drafter
- Civil technician
- Map maker
- Welder

Mechanical
- Plumber
- Construction electrician
- Millwright
- Pipefitter
- Elevator constructor
- Sheet metal worker

II. TEACHING STRATEGIES

A. GOALS

1. To give examples of how the economy affects employment and therefore the individual.
2. To identify general skills required to secure a job.
3. To identify specific skills required for entrance into a specific construction occupation.
4. To explore occupations in CONSTRUCTION TRADES--Builders.

B. INTRODUCTORY ACTIVITIES

1. Discuss how the economy affects the construction industry--include mortgage funds, material costs, wages, inflation.
2. List different kinds of structures. Include houses, apartments, factories, bridges, highways, tunnels, dams and airports. Identify some occupations required in their construction. Discuss why people would choose to work on different types of structures.
3. Take a field trip to a construction site to identify tasks, occupations and skills of the construction workers. Upon return to class, list the basic skills that are taught in school and those skills which are special and unique to be learned in a building trades program.
4. Construct a model building with actual construction activities. For classes wanting a small project, the building of bird houses or feeders will give excellent "hands-on experiences." (This activity could be coordinated with the Construction Trades unit "Finishers".)

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a display of model construction site machines such as bulldozer, crane, etc. Provide information on the nature of the operator's occupation, training,and skills.
2. Prepare a scrapbook of pictures showing the various stages required for the development of a structure. Start with the architect and end before the finishers such as wallpaper hangers and painters begin.
3. Design a house of the future. Consider new means of heating and cooling, and new construction materials.
4. Illustrate different settings and types of construction for the structural iron worker, using magazines and catalogs for sources.
5. Prepare a demonstration which shows the tools, skills,and materials used by a bricklayer or stone mason. (A possible source is the high school building trades class.)
6. Borrow a set of construction blueprints from a contractor. Give an illustrated report identifying how a portion of a building is drawn to size.

7. Display a set of blueprints for a building, such as an office, school, or home. One set should be an architectural plan drawing including various elevations, a heating and ventilating draft, a plumbing draft, and an electrical draft.
8. Prepare a blueprint for the construction of a small storage shed. Use a building catalog as a source.
9. Research the work settings and work conditions of construction workers on bridges, tunnels, and dams. Identify how their occupations affect their lifestyles.
10. Prepare a poster illustrating the different systems of heating or cooling a building.
11. Use a map of your area to plan a new highway. Prepare a paper indicating problems to be solved before construction begins, e.g., purchase of property, landfills, etc.
12. Prepare a model of a bridge using straws or toothpicks. Explain its unique construction and label parts.
13. Prepare a display of different kinds of bridges. Indicate settings for each kind.
14. Set up a display of different kinds of hammers, nails, saws, and lumber. Practice sawing and nailing. Record experiences of students in the classroom.

2

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

CONSTRUCTION TRADES

FINISHERS

PREFACE

Are you interested in spending several years in an apprenticeship program rather than going to college? Would you like to have a job with employment opportunities all over the country? Do you have a business talent that you would like to use in establishing your own business? If you answered yes, then a career in the construction trades may be for you.

Buildings must be constructed and then finished both on the inside and outside. Finishers install floorings and floor coverings, apply plaster, hang wallpaper, finish dry walls, and paint interiors and exteriors. Painters not only work on houses, but also paint bridges and tall buildings. Most finishers need to be able to do minor repair work to the basic construction as well as be skilled in their own specialties.

As in other careers, additional training and experience in the construction trades will help in obtaining supervisory positions or successfully operating one's own business.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Several skills may be required to perform a given task.
2. Additional training and experience increase earning potential.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Mathematics - Units on measuring and on algebraic computation.
2. Industrial Arts - Units on finishers and on finishing materials.
3. Art - Units on color and design and on interior decorating.

C. OCCUPATIONS

- Interior
  - Lather
  - Marble setter
  - Painter
  - Hardwood floor layer
  - Insulation worker
  - Drywall finisher
  - Plasterer
  - Terrazzo worker
  - Paperhanger
  - Floor covering installer
  - Drywall installer
  - Cabinet maker
- Exterior
  - Painter
  - Stucco mason
  - Roofer
  - Permastone dresser

TEACHING STRATEGIES

A. GOALS

1. To describe how additional training and experience increases one's earning potential.
2. To identify some of the skills required to perform a given construction trades task.
3. To explore occupations in CONSTRUCTION TRADES--Finishers.

B. INTRODUCTORY ACTIVITIES

1. Ask a member of one of the construction trades unions to talk to the class explaining apprenticeship programs and how salaries are determined. Include methods of receiving additional training and experiences on or off the job.
2. Select an occupation in the field of construction finishers with which the students will be most familiar. Identify the tasks to be performed and list the skills needed to accomplish the task. Have each student identify a job of special interest and list the skills that would be needed to accomplish one or more tasks associated with that job.
3. Compute the amount of floor covering needed for the classroom floor, the amount of paint needed to paint the four walls, the number of ceiling tiles needed to cover the ceiling. Use metric measurements.
4. Prepare a list of the workers and the materials needed to construct the school. (A contest could be fun and educational.)
5. Finish the structures built in the unit on Builders by painting and roofing them.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a display of the different kinds of materials used to finish interior walls. Label each type with the names of special occupations required and the tools used. Provide pictures of material being installed.
2. Visit a painter and/or paint and wallpaper store to gather information on types of paint and/or wall coverings. Identify specific skills and tools needed to paint, varnish, wallpaper, etc., a house. Prepare a display of materials and tools.
3. Visit a lumber yard or building center to find out about wooden flooring. Request a floor installer to visit school and tell about that job. Discuss the changes in flooring and the future of the wooden floor.
4. Visit a carpet center. Discuss with the carpet installer how one learns to install carpet. What skills are needed? Does a carpet installer need to know math, science and reading? Borrow some samples of carpet and other types of floor coverings (excluding hardwoods) to display. Prepare a brochure describing training, skills, tools, and earning potential in the floor covering business.

5. Prepare a history of ways people have insulated themselves from the weather. Use samples where possible. Identify methods of installation and uniqueness of the properties of each material.
6. Role play a contractor working with a client to make final decisions for finishing a house. Have specialists in flooring, paint, wallpaper, cabinets, etc., act as consultants. Use a doll house as a model with a predetermined scale for figuring quantities needed.
7. Prepare a display of different types of roofing materials. Identify different skills required to work with each kind of material.
8. Ask for a book of wallpaper samples from a dealer. Purchase some wallpaper paste. Select a page of wallpaper, cut it vertically into 4 inch strips. Using a piece of cardboard the same size as the original sheet of wallpaper, practice papering the cardboard "wall."
9. Secure some unfinished lumber and several grades of sandpaper. Experiment to learn what kinds of sanding one gets from each type of sandpaper.

3

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

EXTRACTION OF RAW MATERIALS

PREFACE

If value is determined by scarcity, then the materials we are converting into energy must be among our most prized possessions. Nearly all of the nation's energy for industrial and personal use comes from oil, gas and coal. In recent decades we have had increasing demands on our resources as the population continues to grow and demand more manufactured goods.

Few products from mines reach the consumer in their natural state, as nearly all require further processing. Metal mines provide iron, copper, gold, and other such ores. Quarrying and other non-metallic mining yield many of the basic materials such as limestone and gravel for building schools, offices, homes, and highways.

Employment in the mining and petroleum industry in expected to increase about as fast as the average for all industries in the mid 1980's, as the nation strives to become self-sufficient in energy sources. Employment in quarrying and non-metallic mining is expected to decline as labor-saving equipment leads to higher output with fewer workers.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. The decision-making process can be used to set priorities in developing personal goals.
2. Basic career information will aid in making career-related decisions.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on minerals and fuels.
2. Social Studies - Units on production of raw materials.

C. OCCUPATIONS

Sample Industries

Mineral Fuels: Coal, lignite, peat, petroleum, natural gas. Metallic Minerals: Iron, copper, aluminum, gold, silver. Non-metallic Minerals: Sand, gravel, building stone, coriendum, asbestos, clay, lime.

Examples of Occupations

Coal Mining:

- Cutting machine operator
- Shot firer
- Shuttle car operator
- Longwall machine operator
- Fire boss
- Roof bolter
- Face boss
- Dragline operator
- Rotary auger operator
- Preparation plant central control operator
- Mechanical engineer
- Surveyor
- Drilling machine operator
- Loading machine operator
- Continuous-mining machine operator
- Rock-dust machine operator
- Stopping builder
- Overburden stripping operator
- Coal loading machine operator
- Tractor operator
- Wash box attendant
- Mining engineer
- Safety engineer

Petroleum and Natural Gas Production and Gas Processing:

- Petroleum geologist
- Mineralogist
- Photogeologist
- Drafter
- Prospecting computer
- Shothole driller
- Lease buyer
- Tool pusher
- Derrick operator
- Pumper
- Treater
- Gas-compressor operator
- Acidizer
- Sample taker
- Paleontologist
- Stratigrapher
- Petrologist
- Surveyor geophysicist
- Observer
- Shooter
- Rig builder
- Rotary driller
- Roustabout
- Gauger
- Dehydration-plant operator
- Cementer
- Perforator operator
- Well puller

II. TEACHING STRATEGIES

A. GOALS

1. To use the decision-making process for setting priorities and developing personal goals.
2. To identify the basic career information required to make career-related decisions.
3. To become aware that the geographical location of an industry can affect the selection of a career.
4. To explore occupations in EXTRACTION OF RAW MATERIALS.

B. INTRODUCTORY ACTIVITIES

1. Discuss what basic career information everyone should have in order to make a career decision, e.g., type of training, cost and time for training, manpower demand, potential earnings, special personal characteristics, work setting, unpleasant and pleasant aspects, specific materials and equipment, dress requirements, individual interests and skills. Select two or three occupations of interest to the class and outline some basic career information needed to make a decision to pursue that career.
2. Have each student identify one of the career goals he/she has set. Hand out a dittoed sheet listing the items in Introductory Activity #1. Have students fill this out using resources available in the school. Place this information in the personnel file which was developed in the initial Introductory Unit at the beginning of the Curriculum Guide.
3. Ask each student to list at least five personal goals. Then put them in rank order by priority. Discuss how the student made this decision. Relate prioritizing to the extractive industry and the ecological movement. What are some of industries' top priorities? What factors help them make their decisions? Discuss the ranking in priority, by industries, of the reclamation of land in the 1920's, the 1970's and the year 2000.
4. Display some of the raw materials extracted from the earth such as coal, oil, iron, sand, limestone etc. Use films as a basis to discuss the various extractive and processing methods. Locate on a map any sources of these materials within one hundred miles of your community.
5. Plan a field trip to one of the sources of raw materials. Because this is very dangerous work, it may not be possible for the class to be invited into the quarry or mine. If this is so have a worker come to class and discuss the job, working conditions and safety hazards. Use a film related to the industry about which the speaker is familiar.
6. Invite a water well driller to class to discuss this occupation, decisions to be made on the job, and how one would decide to pursue a water extraction job.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a chart showing the locations where one would have to live if one were to work in one of the following extractive industries.
    a. coal
    b. petroleum
    c. natural gas
    d. iron
    e. copper
    f. gold
    g. granite
    h. marble
    i. limestone
    j. clay
    k. sand and gravel
    l. uranium
2. From the above list prepare a list of hazards associated with working in one of these occupations.
3. From the above list select one industry and identify specific occupations, giving a short summary of duties, responsibilities, salaries, training and fringe benefits.
4. Tape an interview with someone who works in one of the extractive occupations. Be sure to find out what basic information the worker had when he/she made the decision to work in that particular industry.
5. Send for brochures available from various mining companies which describe the mining process.
6. Send to major oil companies for information concerning the exploration and extraction phase of their industry. Prepare a report on types of equipment and skills needed to work in this industry.
7. Prepare a display of children's earth moving equipment which will demonstrate open pit mining.
8. Prepare a display of various ores and minerals in their raw state. Indicate the different processes used to extract the materials.

4

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

MANUFACTURING AND PRODUCTION

PREFACE

Manufacturing is defined as a process used to make products using hand tools or machinery. It can be on large scale, producing millions of units a day, or on a small scale taking several weeks to complete one item. The manufacturing industry employs well over 19 million people and by 1980 another million will be employed. Manufacturing is such a big and diverse industry that it is difficult to list all of the job titles. For example, the Dictionary of Occupational Titles lists more than 8,000 titles. Because of development of new materials and products, new jobs are constantly being developed.

In manufacturing, as in other occupations, the more training and experience you have, the more variety you can expect in your job. The opposite is also true, the less you know, the more repetitive your job is likely to be. You may want to get a head start into an apprenticeship program by entering an industrial-oriented vocational education program offered in your high school.

Have you ever wondered why people work, especially in producing products to which they cannot relate? Perhaps in this unit you will meet some very special people who will share with you their philosopy about why they work and how the work segment of their life helps them to be members of a society committed to the development and enrichment of one's work role, citizenship role, family role, and leisure-being role.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Obligations for fair pay and work are implied between employee and employer.
2. Most people work and there are many reasons why people work.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on manufacturing, unions, and the industrial revolution.
2. Industrial Arts - Units on manufacturing.

C. OCCUPATIONS (Sample Industries)

- Foundries
    - Patternmaker
    - Sand mixer
    - Machine molder
    - Coreoven
    - Core setter
    - Pourer
    - Shot blaster
    - Chipper
    - Annealer
    - Mechanic
    - Millwright
    - Machine tool operator
    - Hand molder
    - Molder's helper
    - Coremaker
    - Tender
    - Furnace operator
    - Shake out worker
    - Tumbler operator
    - Grinder
    - Inspector
    - Machinist
    - Crane and derrick operator
- Motor Vehicle and Equipment Manufacturing
    - Professional and technical engineer
    - Mathematician
    - Statistician
    - Laboratory technician
    - Assembler
    - Metal finisher
    - Polisher
    - Sewing machine operator
    - Inspector
    - Crane operator
    - Checker
    - Stock clerk
    - Electrician
    - Plumber
    - Carpenter
    - Chemist
    - Drafter
    - Physicist
    - Metallurgist
    - Machine tool operator
    - Electroplater
    - Sprayer
    - Cutter
    - Cushion builder
    - Materials handler
    - Power truck operator
    - Stock chaser
    - Mechanic
    - Millwright
    - Pipefitter
    - Sheetmetal worker
- Drug
    - Chemist
    - Chemical engineer
    - Mechanical engineer
    - Pharmaceutical operator
    - Compounder
    - Pill and tablet coater
    - Ampoule filler
    - Inspector
    - Biological scientist
    - Industrial engineer
    - Technician
    - Granulator machine operator
    - Compressor
    - Tablet tester
    - Ampoule examiner

II. TEACHING STRATEGIES

A. GOALS

1. To understand that certain obligations for fair pay and work are implied between employee and employer.
2. To identify reasons why most people work.
3. To explore occupations in MANUFACTURING AND PRODUCTION.

B. INTRODUCTORY ACTIVITIES

1. Discuss why people work and how work fulfills human needs. Discuss how the industrial revolution, Henry Ford's assembly line process, and the concept of "team work" has affected workers. Much of the work done today is done by machine, with the worker in control of buttons. Forecast the factories of the future and methods of manufacturing.
2. Discuss in class why the instructor wants the students to accomplish certain blocks of work. Discuss some of the rewards, satisfactions, and frustrations. Relate the student as a worker to the employee working for a paycheck. Look for similarities and dissimilarities.
3. Have each student interview a family member or friend who works to get the following information:
    a. Why do you work?
    b. What satisfactions do you get from working?
    c. What are your responsibilities to the company you work for?
    d. What are some reasons why people get fired?
    e. If you had your choice, would you rather not work? Why or why not?
    f. If you do volunteer work, what are some of your reasons?
    g. When you work at home, what are some of your satisfactions? What are some of the things you do that other people sometimes buy or pay other workers to do?
4. List major reasons why people work. Have the students write a short essay describing why they plan to work. Include contributions they want to make to society as well as to themselves.
5. Discuss why both the employer and employee have work obligations to each other. How does the fulfillment or neglect of the obligations on the part of one, affect the other?
6. Divide the class into small groups. On the preceding page there are listed some occupations in three different types of manufacturing and production. Using those industries, or by selecting some from the following list, have the groups do some of the Individual Activities on the next page: Manufacturing and Production Industries--aircraft, aluminum, apparel, foundries, motor vehicle and equipment, chemical, iron and steel, office machines and computers, paper and allied products, petroleum refining, plastics, rubber, wood products, cosmetics, textiles, jewelry, scientific instruments, musical instruments.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a list of occupations within the industry.
2. Prepare a map showing locations of most of the manufacturing plants.
3. Set up a display of a product and its component parts.
4. Set up an assembly line to produce a product made in your industry. Some of the activities may need similations or pictures for some processes such as melting.
5. Prepare a report on the work settings, union pay, fringe benefits, and hazards found in this industry.
6. Think of products your industry could be making twenty years from now.
7. Prepare a sales promotion which encourages people to work in your industry. Plan magazine, newspaper and video presentations. Include what the employer expects from the employee as well as the benefits to the employee.
8. Review a film and/or books describing your industry. Prepare comments that would help others to learn about occupations in a particular industry.
9. Prepare a booklet outlined by the subjects you are now taking. List ways the skills being taught will be utilized in the work world.
10. Prepare a booklet outlined by the subjects you are now taking. List ways the skills being taught in those classes could also be used in your non-work time activities.

5

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

MAINTENANCE, SERVICE AND REPAIR

PREFACE

Society has become very dependent on the services provided by maintenance, service, and repair personnel. Because almost everything an American uses has been machined or is some type of machine, everyone is affected by the services given to keep the "wheels" going.

Employment in this area is one of the fastest growing of the groups of skilled workers in the nation's labor force. This occupational field offers many career opportunities to people who are mechanically inclined and who are willing to invest a few years in learning a trade. Employers look for applicants who have a mechical aptitude, like to work with their hands, and have hobbies or interests such as auto repair, model building, or radio and television construction or repair.

The use of reading, math, science, and problem solving is very evident in this field. Opportunities to meet and observe workers in this occupational area will provide students with a greater awareness of the need for excellence in the basic academic skills.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Society is dependent upon the productive work of individuals.
2. Skills and knowledge in subject areas are helpful in occupational competencies.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Math - Unit on problem solving and estimating costs.
2. Science - Unit on electricity and small engines.
3. Industrial Arts - Unit on maintenance and repair procedures.
4. Language Arts - Unit on reading and following directions.

C. OCCUPATIONS

Airconditioning and refrigeration mechanic
Gas burner mechanic
Automobile body repairer
Transmission specialist
Automotive air-conditioning specialist
Radiator mechanic
Motor boat mechanic
Diagnostic analyzer
Electric motor repairer
Aviation power plant mechanic
Computer service technician
Heavy equipment mechanic
Locksmith
Organ tuner
Watch repairer
Furnace installer
Oil burner mechanic
Appliance repairer
Automotive mechanic
Tune-up mechanic
Front end mechanic
Brake mechanic
Automotive glass mechanic
Motor rebuilder
Fuel-injection servicer
Generator tester
Aviation airframe mechanic
Business machine repairer
Diesel mechanic
Electric sign repairer
Piano tuner
Vending machine mechanic

II. TEACHING STRATEGIES

A. GOALS

1. To understand the importance of providing good service for maintenance and repair of equipment.
2. To appreciate the dependence society has on the productive work of the equipment servicer.
3. To identify skills and knowledge in subject matter areas needed by the equipment servicers.
4. To explore occupations in MAINTENANCE, SERVICE AND REPAIR.

B. INTRODUCTORY ACTIVITIES

1. List the types of repair, maintenance, or service most needed for the home. Discuss why each family doesn't do all of its own repair work. Reflect on how customers react to poor/good service. What factors cause problems between the repairer and customers?
2. Have a person in automotive, television, or appliance repair talk to the class. Prepare the person ahead of time to emphasize reading, math, science, and problem-solving skills used in every day work. Discuss the problems of customers watching the worker, concerns about working too long, not having the right part etc. Emphasize schooling to learn about new or changed products.
3. Role play ways the customer may react to the work of a service worker. Emphasize the coping behavior of the service worker.
4. Encourage students to bring service manuals and non-working appliances to class to take apart and reassemble. Discuss uses of various tools, dexterity requirements, and use of service manuals.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a chart which illustrates and describes the "Occupational Safety and Health Act" concerning safety of electrical workers. (Source: Careers in Focus: Exploring Occupations in Electricity and Electronics.)
2. Interview the city building inspector. Find out how the city enforces electrical safety codes and practices.
3. Prepare a drawing of a car or truck. Indicate each part which requires electrical energy to operate, e.g., windshield wipers, turn signals.
4. Prepare a diagram of the process of making electrical power for an automobile.
5. Visit an auto repair shop or the high school mechanics class. Find out how mechanics test auto electrical systems, and the process of repair.
6. Ask the principal of the school to allow you to observe an electrical repairer (duplicating machines, typewriters, circuits, refrigerators, heating system) at work. Observe

safety factors, tools and types of knowledge needed to perform the job.

7. Make a list of electrical appliances in your home. Make a second list indicating the equipment the electrical appliance replaced. Make a third list of other items which could be electrified.
8. Prepare a display of electrical outlets, switches, and sockets. Identify where and how they would be used.
9. Prepare a drawing of your home's floor plan. Map out the circuits from the fuse box to each electrical outlet.
10. Visit a building under construction. Note where the electricity comes into the building and how it is distributed. Prepare some rough drawings to illustrate to others what you have observed.
11. Interview an electrician or electrical repairer. Find out what skills are required and how math and science are used.
12. Look through Popular Mechanics or Popular Science magazines for hints on repairs. Select one item and prepare a chart, illustrating the item, the tools needed, and the steps for repairing the item.
13. Visit an appliance repair shop. Arrange to borrow or purchase an old motor that can be taken apart. Prepare a display with the parts labeled.
14. Use a model airplane to identify some of the electrical systems.
15. Use a housewares catalog to prepare a booklet of the different types of lighting available for today's home. Include the variety of bulbs and fixtures.
16. Give a demonstration which would illustrate how school subject learnings are applied in a maintenance, service, or repair occupation.

6

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

COMMUNICATIONS

GRAPHIC

PREFACE

Humans have always devised ways of communicating ideas, wants, and dreams with other people. One medium has been through drawings. As society progressed, new means are devised to reach greater numbers of people. The birth of the printing press brought about a revolution in providing printed information to the masses. Preparing the communications and printing of that material has become very specialized. More and more printing is expected to be done in the future. However, this will probably not lead to a great increase in the number of printers required because of the updating and improvement of machines to do more of the work.

In 1974 almost 400,000 printing craft workers were employed to produce newspapers, magazines, business forms, and hundreds of other printed materials. Although most worked for publishers and commercial printing shops, many had jobs in insurance companies, paper mills, government agencies, and many other organizations which do their own printing.

The most common way to learn the skills needed in most of these fields is through apprenticeships, which usually last from four to six years. An important skill in this field, as well as in others, is to learn how to take or give instructions, with the correct interpretations. Few employers are interested in employees who misinterpret instructions, therefore listening skills are important to develop in preparation for any occupation.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. There are effective interpersonal relations skills for giving or evaluating instructions.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Art - Unit on hand printing and design.
2. Industrial Arts - Unit on printing.

C. OCCUPATIONS

- Printing
  - Hand compositor
  - Linotype machine operator
  - Monotype caster operator
  - Cathode-ray tube operators
  - Electrotyper
  - Proofreader
  - Stripper
  - Lithographic press operator
  - Silk screen maker
  - Paste-up person
  - Silk screen machine operator
  - Typesetting machine operator
  - Monotype keyboard operator
  - Phototypesetting machine operator
  - Stereotyper
  - Lithographic artist
  - Platemaker
  - Printing press operator
  - Silk screen printer
  - Offset press operator
- Photography
  - Photograph retoucher
  - Developer
  - Print maker
  - Photographic darkroom technician
  - Colorist
  - Photoengraver
  - Photographic laboratory technician
  - Copy camera operator
- Bookbinding
  - Bookbinder
  - Collator
  - Spiral binder
  - Folding machine operator
  - Stitching machinist
- Commercial Artist
  - Package designer
  - Sign painter
  - Illustrator
  - Paste-up artist
  - Photographer
  - Cartoonist
- Writer
  - Reporter
  - Technical writer
  - Columnist
  - Copyreader
  - Researcher
  - Poet
  - Joke writer
  - Book reviewer
  - Re-writer
  - Freelance writer
  - Critic
  - Editor
  - Ad writer
  - Novelist
  - Political speech writer
- Other
  - Wire photo operator-news

II. TEACHING STRATEGIES

A. GOALS

1. To demonstrate skills required for giving or evaluating instructions.
2. To become aware of the various means of communicating.
3. To explore occupations in GRAPHIC COMMUNICATIONS.

B. INTRODUCTORY ACTIVITIES

1. Prepare a display of various types of printed materials. Include newspapers, paperback books, maps, slick magazines. Elicit from the group their knowledge of occupations involved in preparing the publications.
2. Divide the class into groups of four. One person will be the president of a company planning a new advertising campaign, one will be in charge of advertising, the others will be the commercial artists. The president will select a product to be advertised, which is discussed with the advertising executive who in turn tells the artists what to produce. Samples are sent back to the president who prepares written instructions for changes. (Focus on skills for giving and evaluating instructions.)
3. Visit the print shop in your high school or a commercial shop in your community. Discuss with the printers the importance of clear, concise instructions, and their ways of evaluating those instructions.
4. Visit a print shop and ask to borrow a galley and galley proof. Put them on display where students may practice proof reading.
5. Devise a classroom activity which would use the student work to make a book with an appropriately printed cover. Lay-out, paste-up, illustrating, indexing, printing (duplicating), and binding should be a part of the process. The yearbook advisor will be a good source of information.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a display of containers used to package a particular product such as bars of soap. Prepare a survey for students to indicate which package design they like best and why.
2. Prepare a poster which describes the occupations being studied in this unit.
3. Prepare a presentation of newspaper ads. Indicate those parts of the ad which require drawing skills.
4. Work with a friend who writes stories or poems. Have the writer prepare a list of the illustrations wanted. Have the illustrator prepare written statements indicating whether the illustration can be made as required. Prepare the illustrations either drawn or photographed. Using standard 8½" x 11" paper, prepare a mock-up of how the material will look on a printed page in a magazine.

5. Use a camera to take pictures of a product from several different angles. Survey students in the class to select the most-liked picture.
6. Use a camera to prepare a picture story of an event or problem in your community.
7. Visit a dark room. Prepare a report telling what the technicians do and how they evaluate instructions given to them.
8. Prepare a yellow pages directory of printing companies within a 25 mile radius of your community. Include information as to the type of printing they do.
9. Prepare a display of samples of different methods of printing. Write job descriptions for workers in each method.
10. Study a book you use in class which has more than one color. In offset printing a separate plate must be used for each color. Prepare a display of pages using one or more colors. Find a page on which the colors were not printed in exact registration.
11. Arrange for the art teacher to give a demonstration in silk screening. Help the instructor to prepare a display of materials and techniques used in this type of printing.
12. Visit your librarian. Ask for samples of books in library bindery and those not in library bindery. Prepare a report on the purposes and costs of each.
13. Prepare a display of materials bound by different methods. Prepare cards explaining how each is bound.
14. Select a simple object with at least three parts such as a ball point pen. Prepare a drawing which will communicate to the manufacturer every detail needed to manufacture or build the product. When completed place three or more different pens in front of the picture to see if others can accurately select the pen you drew.
15. Prepare a machine drawing of a thermostat, light switch, or a similar simple item.
16. Prepare a display of drafting tools and give a demonstration of their use.
17. Use a French curve to try matching the evaluation lines on a United States Geological Survey topographical sheet. Make a climate map using a French curve. (See a geography book as a source.)
18. Prepare a short essay describing how your life would be affected if graphic communications were suddenly annihilated.
19. Prepare a set of instructions for the construction of a cardboard box. Exchange your instructions with a classmate, then make the box following instructions. Prepare evaluative statements about the instructions for the production of the box.
20. Prepare a description of how people might react differently to the following instructions:
    a. Your assignment is pages 127-150.
    b. We will eat at 1:00 in the park.
    c. I want an advertisement for shoes which is clear and concise, yet explains everything; that doesn't emphasize price but gives a price comparison; that isn't gaudy yet draws attention; and won't cost too much.

7

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

COMMUNICATIONS

ELECTRONIC

PREFACE

Electronic Communications include the methods by which a variety of forms of information can be transmitted and received via radio, television, telegraph, telephone, data-phone etc.

A wide range of jobs such as directors, programmers, technicians, engineers, writers,and designers is available in the broadcasting industry. Because new radio stations, as well as new educational television stations, will be opening, employment in the broadcasting industry is expected to grow.

Telephone jobs are found in almost every community. Employment in this field will grow primarily because of rising population and higher incomes. Greater demands for transmission of computer-processed data and other information via telephone company lines will also stimulate employment growth.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. There are effective interpersonal relations skills for giving or evaluating instructions.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Language Arts - Units on oral communications, on telephone manners, and on radio or television broadcasting.
2. Science - Unit on sound waves.
3. Social Studies - Unit on communication.

C. OCCUPATIONS

Radio and Television Broadcasting

- Program director
- Continuity director
- Director
- Community and public affairs director
- Music librarian
- News director
- Newswriter
- Floor Manager
- Make up artist
- Sound effects technician
- Film librarian
- Development engineer
- Sound engineer
- Disc jockey
- Sports writer
- Film and/or television writer
- Traffic manager
- Continuity writer
- Program assistant
- Producer
- Announcer
- Musical director
- Newscaster
- Studio supervisor
- Property handler
- Scenic designer
- Film editor
- Chief engineer
- Lighting engineer
- Air traffic controller
- Weather reporter
- Camera crew member

Telephone

- Framewirer
- Trouble locator
- Cable splicer
- PBX installer
- PBX and CENTREX repairer
- Telephone company operator-directory assister
- Railroad telegrapher and telephoner
- Telefax supervisor
- Central office repairer
- Line installer
- Telephone installer
- Telephone repairer
- PBX operator
- Long distance operator
- Air traffic controller
- Commercial telegraph operator

II. TEACHING STRATEGIES

A. GOALS

1. To identify various communication media.
2. To understand the interpersonal skills needed for giving and receiving instructions.
3. To explore occupations in ELECTRONIC COMMUNICATIONS.

B. INTRODUCTORY ACTIVITIES

1. Review with students the development of communications. Start with oral communication, cave drawings, Gutenberg Press, Marconi's wireless, Alexander Graham Bell's telephone, the telegraph, radio, television and communication satellites. Project future communication media.
2. Discuss how some people can get others to follow their directions. List characteristics such as pleasant, precise, firm, courteous, flexible etc. Discuss ways of evaluating instructions--clarity, priority rank, effects on others, etc. Apply discussion to individuals and their effectiveness. Discuss the importance of instructions in the communications industry.
3. Request students to list credits given for television programs and identify some of the tasks for each occupation listed.
4. Interview a radio or television director and/or a telephone company manager.
5. Divide the class into three groups: A news team for newspaper or magazine; radio;and television. Give each group the same topic to cover. Compare similarities and differences in presentations.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Visit your local radio or television studio. Identify the various workers. Prepare a diagram showing the people involved in getting a news story on the air. Watch for instances where workers receive instructions. Analyze how they react and why.
2. Watch your favorite television program. Take notes on the following and give a report in class.
    a. Shifting of camera angles
    b. Changing of scenes
    c. Sound effects
    d. Make-up
    e. Settings
3. Write up a news event or announcement. Tape record your messages.
4. Tune in a sports event on two televisions. Have another person record the television announcer. On another tape recorder, you record the events as you see them without the sound on the television. Play back the tapes and make comparisons.

5. Using the current television listing, prepare a new weekly schedule for prime time viewing for one network. Submit your schedule to your public (class). Be prepared to defend your decisions.
6. Use a video camera or movie camera to film a documentary. Prepare the script--identify the scenes, etc. Share your film with your class.
7. Prepare an interview to be aired live on television. Identify steps to follow, people and equipment needed, and problems to be anticipated.
8. Write and prepare a radio or television commercial.
9. Prepare a short history of the development of oral communications. It may be live, on tape, or printed with illustrations.
10. Borrow from your telephone company sample telephone equipment. Role play good and poor ways of using the telephone.
11. Role play an operator helping an irate customer, an emergency, and/or a call for information.
12. Prepare a set of instructions for using the telephone and the telephone directory.
13. Prepare role-playing situations showing workers reacting to the following situations in two different manners. One that will keep a job--the other that will help lose it.
    a. Change to camera 5.
    b. You will have to cut scene 51 from the program.
    c. The announcer's jacket doesn't film well.
    d. John Wayne has a shiny forehead.
    e. We are starting a new show next week. Decide which of our present shows will be dropped.

8

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

ELECTRONICS AND INSTRUMENTATION

PREFACE

Electronics includes the science, technology, and industry that deals with electrons, electronic devices, and electronic systems. Electronics is named after the electron, a minute atomic particle that reacts with other particles which produces electricity.

This new and emerging industry began in the 1920's. Some of the products are televisions, radios, watches, microwave ovens, hearing aids, organs, space guidance systems, calculators, computers, etc.

Only the limits of the scientists' minds will hinder the development of products in this field, as this industry is very dependent on research and development. As a result, one out of every nine electronics workers is an engineer or scientist.

Employment in electronics and instrumentation is expected to increase faster than the average of all industries in the 1980's. Technicians and other plant workers are required to have good color vision, manual dexterity, good eye-hand coordination, and patience.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Individuals differ in their physical characteristics.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on electronics and on basic laws and electrical theories.
2. Industrial Arts - Units on electronics.

C. OCCUPATIONS

Research and Development
    Engineer
    Mathematician
    Statistician
    Electronic technician
    Avionics technician
    Chemist
    Physicist
    Systems analyst
    Drafter
    Instrument designer
Assembly
    Assembler
    Tester
    Machine tool operator
    Instrumentation technician
    Inspector
    Machinist
    Control technician
    Equipment installer

II. TEACHING STRATEGIES

A. GOALS

1. To identify certain physical characteristics that are required for specific occupations.
2. To understand that individuals differ in their physical characterics.
3. To identify physical characteristics important to electronic and instrumentation occupations.
4. To explore occupations in ELECTRONICS AND INSTRUMENTATION.

B. INTRODUCTORY ACTIVITIES

1. Display the insides of a transistor radio to the class. If possible also display a tube radio. Discuss the differences. Discuss the characteristics students think a worker in an assembly plant would need to assemble the transistor radio. Introduce one of the major factors for miniaturizing electrical devices--the space program.
2. Ask students to make a list of all the electrical devices each uses in a week. Compare lists and look for uses of electricity people overlook. Look to the future by having the students suggest new uses for electricity. Discuss ways of saving electrical energy.
3. Borrow a large quantity of nuts, washers, and bolts and set up an assembly line. Divide the class into groups. Give five minutes to determine an effecient assembly procedure. Each group should include an inspector, supervisor, and assembler. Select one person to supervise the total efficiency, and quality of work.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Carefully remove the back of a transistor radio or phonograph. Printed on the back may be the schematic. Prepare an explanation of symbols and terms. Use of reference tools may be necessary. Observe safety rules.
2. Identify the parts of a radio by the symbols written on the schematic which is inside the back cover. Prepare an explanation of the parts.
3. Interview a person who works on an assembly line. Ask about production quotas, pay scales, work breaks, required physical characteristics, and job satisfactions.
4. Build an electronics kit. Give a demonstration explaining component parts and their functions.
5. Visit a radio-television repair shop. Ask to watch the use of the oscilloscope.
6. Visit the sound control booth of a television or radio station. Observe how the sound engineer adjusts the amplifiers.
7. Visit several auto dealers. Ask to look through manuals which show the electrical systems of cars. Try to read the the schematics and find out what the different systems do.

8. Prepare a chart of pictures showing the various settings where a person interested in electronics might work.
9. Prepare a poster showing some of the many products that use transistors. Indicate some other products that could be transistroized.
10. Visit the electronics class in your high school. Find out the skills students acquire and the job opportunities which are available at the completion of an electronics course.

9

OCCUPATIONAL CLUSTER
INDUSTRIAL ORIENTED OCCUPATIONS

ENERGY AND POWER PRODUCTION

PREFACE

This unit is primarily concerned with the production of energy such as electrical power, rather than the extraction of the raw materials to produce the energy. The exploration activities are centered around the power plants and those people employed in that business.

As the population continues to grow and society uses more energy, new sources of fuel must be found and developed such as nuclear, geothermal, solar, coal gasification,and fuel cells. It is difficult to forecast the employment trends in this field. However, we can be reasonably sure that there will be larger numbers of technical jobs created as solutions are sought to the energy problem.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. An individual's values and personal goals are influenced by the values of other people.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Science - Units on energy and power.
2. Industrial Arts - Units on electricity.
3. Social Studies - Units on social values related to energy and power.

C. OCCUPATIONS

Boiler operator
Auxiliary equipment operator
Central control room operator
Substation operator
Trouble shooter
Cable splicer
Meter reader
Gas service worker
Atomic fuel assembler
Radiographer
Atomic scientist
Refinery superintendent
Project manager
Turbine operator
Steam operator
Power plant operator
Watch engineer
Load dispatcher
Line installer and repairer
Ground helper
Electric meter repairer
District representative
Gas equipment control worker
Power reactor operator
Diesel engineer
Nuclear energy plant technician
Power plant engineer

II. TEACHING STRATEGIES

A. GOALS

1. To understand how a person's values and personal goals are influenced by the values of other people.
2. To understand the concept of conservation.
3. To explore occupations in ENERGY AND POWER.

B. INTRODUCTORY ACTIVITIES

1. Develop the following discussion:
    a. Review the following concepts as related to energy and power.
        (1.) Conservation
        (2.) Waste
    b. Consider human values placed on fuel at different time periods.
    c. Discuss the 1974 energy crisis.
2. Have the students debate: Resolved: There is no energy crisis.
3. Role play how people influence others. Situations: Going to a movie, buying clothes, selecting a friend, getting a job, selecting an occupation.
4. Visit a local electrical power plant. Find out what is used to produce the electricity.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a report on one of the following topics. Include the types of occupations to be found in each industry.
    a. Conversion of energy sources to electrical power.
        (1.) Natural gas
        (2.) Petroleum
        (3.) Coal
        (4.) Geothermal
        (5.) Wind
        (6.) Solar
        (7.) Water
        (8.) Uranium and thorium
    b. Energy conservation
    c. Geological explorations
    d. Electrical power plants
    e. Nuclear power plants
2. Prepare a demonstration which illustrates how energy is produced, e.g., water wheel, batteries or solar heat.
3. Prepare a chart which illustrates ways the individual may conserve energy.
4. Prepare a skit which illustrates the conservative individual trying to convince energy-hungry people to be conservative.
5. Prepare an interview instrument which will ask questions concerning the conservation policies suggested on the job and at home. Interview parents and friends. Compare your responses with those of your classmates.

6. Visit the local electric company. Find out where the power comes from, how to read an electric meter and electric bills, and ways the power company suggests to conserve energy.
7. Prepare a map which shows where electrical power is generated.
8. Prepare a map of your state showing the sources of energy used to produce power for the consumer. Identify energy sources which come from out-of-state.

OCCUPATIONAL CLUSTER

"E"

PERSONAL AND PUBLIC SERVICES

TABLE OF CONTENTS

Personal and Public Services Occupations Units

1. Hospitality and Recreation 231
2. Clothing Management, Production and Services 237
3. Institutional and Home Management 241
4. Home Furnishing, Equipment and Services 245
5. Human Development Services 249
6. Protection Services 255
7. Transportation Services 259
8. Government Services 265
9. Personal Services 269

1

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

HOSPITALITY AND RECREATION

PREFACE

Providing a home away from home is big business for those in the hotel and motel business. Providing food, lodging, and leisure-time activities for vacationers and commercial travelers demands positive attitudes and a liking of people. Many entry level positions are held by teenagers, but administrative positions require skills and higher levels of education. Promotions within the occupational areas often come through on-the-job training and experience.

Hospitality industries currently employ approximately 5 million people, the largest numbers of them in food service. The hospitality industries have not changed much from an early ancestor, the roadside inn or tavern. The inn of the 16th and 17th centuries fed, housed, and entertained the weary traveler as well as passed on travel advice for the road ahead. The most notable technological changes have been in the food service segment, with its assemblage of equipment and its menu of prefrozen, precooked, preportioned food; and lodging, which has been restructured because of new transportation patterns. Food service provides 750 million meals a week, about 1 out of every 3 eaten. Not only is food service by far the largest of the hospitality industries, it is also fourth largest in retail sales for the economy as a whole. An advantage of a hospitality career is the wide geographic distribution of potential employers, and as an industry it is more "depression proof". To be successful in a hospitality career students should be outgoing, personable,and like people.

Persons going into recreation should have a background in arts, sports, and/or travel. Opportunities are available for volunteer or paid employment in the private and public sectors. Recreational work may be seasonal, part or full time. The settings can be varied and travel optional, meaning that a recreation director could work in one town, or on a cruise ship. Opportunities are available to work with children, adults, and senior citizens. Liking people and wanting to help them enjoy their leisure time are two important aspects of this cluster area. Good health, physical stamina, patience, resourcefulness, and cheerful outlook are important for the person interested in recreation jobs.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Leisure time activities and interests may lead to a career and one's career may in turn affect the amount and use of leisure time.
2. Economic trends can influence a career choice.

B. SUBJECT MATTER AREA RELATIONSHIP

1. Language Arts - Units on communications skills such as writing letters and promotional literature, and giving directions.
2. Physical Education - Units on physical education which can be identified as necessary for recreation occupations.
3. Social Studies - Units on economics and the needs of the community.
4. Health - Units on health standards for food preparation centers and living accomodations.
5. Home Economics - Units on hospitality services.
6. Arts and Music - Units on the performing arts.

C. OCCUPATIONS

Recreation
  - Camp counselor
  - Playground supervisor
  - Recreation program coordinator
  - Recreation facility manager
  - Park district director
  - Hobby shop manager
  - Life guard
  - Professional athlete
  - Athletic trainer
  - Horse trainer
  - Recreation program leader
  - Activity specialist
  - Recreation supervisor
  - Director of recreation
  - Golf club manager
  - Bowling alley manager
  - Crafts instructor
  - Team manager
  - Umpire
  - Riding instructor

Tourism
  - Information clerk
  - Visitor's guide
  - Airline consultant
  - City tourism director
  - Tour guide
  - Travel counselor
  - Car-rental clerk
  - Travel agent
  - Tour escort
  - Booking agent

The Arts
  - Museum curator
  - Painter
  - Textile designer
  - Art historian
  - Actor/actress
  - Conductor
  - Artist-printer
  - Stagehand
  - Weaver
  - Embroidery designer
  - Art gallery manager
  - Vocalist
  - Music historian
  - Dancer
  - Cartoonist
  - Set designer
  - Sculptor
  - Make-up artist
  - Potter
  - Art critic

(The Arts Cont'd)
- Wallpaper designer
- Drama critic
- Antique dealer
- Instrumentalist
- Music publisher
- Scorer
- Booking agent
- Choreographer
- Prompter
- Costume designer
- Music therapist
- Dramatic coach
- Magician
- Music critic
- Art appraiser
- Music director
- Sports writer
- Instrument builder and repairer
- Composer
- Lexicographer
- Biographer
- Advertising copy writer
- Greeting card writer
- Playwright
- Dance instructor

Food Service Occupations
- Short order cook
- Salad cook
- Cook
- Chef
- Waiter/waitress
- Host/hostess
- Potwasher
- Sanitation supervisor
- Food runner
- Storeroom steward
- Maintenance supervisor
- Personnel director
- Manager
- Bartender
- Vegetable cook
- Baker
- Busboy/girl
- Carhop
- Dishwasher
- Kitchen steward
- Receiver
- Food checker
- Housekeeper
- Equipment supervisor
- Purchasing agent

Hotel and Lodging Occupations
- Desk clerk
- Reservation clerk
- Doorperson
- Elevator operator
- Activities director
- Maid
- Manager
- Switchboard operator
- Cashier
- Bellhop
- Room service attendant
- Security officer
- Maintenance worker
- Assistant manager

II. TEACHING STRATEGIES

A. GOALS

1. To identify which leisure time activities and interests could lead to a recreation career.
2. To explain how the economic climate affects the number of persons employed in an occupational area.
3. To explore occupations in HOSPITALITY AND RECREATION.

B. INTRODUCTORY ACTIVITIES

1. List leisure time activities in one column, match with recreation occupations studied in this unit. Check those strengths which the student could consider as skills required for a career in recreation.
2. List the recreational places where the students go during their leisure time. Identify the occupations of the people who work there.
3. Discuss whether recreation centers are tax-supported or private, and whether they were in existence fifty years ago.
4. Discuss the trends and reasons why people are paying money for leisure-time activities.
5. Discuss changes in hospitality occupations and whether there are more or fewer persons using these services. What about the future? Include economic factors.
6. Set up role-playing situations where an employee is late and business is heavy, rooms are not ready for new lodgers, food is cold instead of hot.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Recreation and Tourism

a. Visit a travel agency, airline, bus,or train station. Get copies of schedules and fares, or visit a service station for maps. Plan a short trip for yourself. Identify the routes to be traveled, points of interest, lodging,and eating. Compute the travel cost according to public transportation fares, or 15¢ per mile by private car. How far would the trip be if measured metrically?

b. If you were a tour guide of your town what would you point out as important? Using maps and information about your community, plan a tour, including dining, rest stops,and lodging.

c. Visit your recreation department to learn of the activities your city provides. What skills do the people use in their jobs? Prepare a brochure which will interest people in participating in the activities.

d. Make individual lists of how members of your family spend their leisure time. Identify occupations which provide those activities.

e. Make or purchase a map of your community. Identify all the recreational areas, places for getting information, and hotels and resturants.

f. Make a collage of the various recreational occupations.

g. Make a packet of information for a specific occupation in this area including:

(1) Special skills, aptitudes and interests.
(2) Educational requirements.
(3) Working conditions and settings.
(4) Employment possibilities.
(5) Summer or seasonal job opportunities.

h. Interview a recreation worker in a nursing home, hospital, school, YMCA or YWCA or Boy or Girl Scouts.

i. Select a sport of your interest and trace the career of one of its stars. Include beginning salaries as well as top salaries. Be sure to look at how the profession affects the lifestyle of athletes and how athletes must plan a second career when they no longer can play.

j. Design a new playground area for your neighborhood. Select equipment for all ages. Use metric measurements to put the plan in scale.

k. Interview someone in a recreation career to find out how leisure time is spent. Does the job affect leisure time? Is leisure time spent doing things not done before the occupation was selected?

2. The Arts

a. Design a greeting card and write a poem or appropriate salutation.

b. Prepare a "show" of your art work. Prepare a program with information pertinent to each piece.

c. Select a drama or musical for which you could design the costumes for each participant. Prepare a portfolio of the designs.

d. Select a topic which the President of the U.S. would like to tell the people about. Write the speech for him.

e. Prepare a one-hour program for the radio audience. Select the records to be played, the ads to be read, and the news to be given. Practice your program and record the amount of time needed for each item. Remember the program begins at exactly 1:00 PM and is off the air at 2:00 PM. Record your program on tape.

f. Write a new school song. You may have to collaborate with a poet or musician.

g. Prepare an ad to encourage students to buy their lunch at the school cafeteria.

h. Select an antique and prepare a prospectus which describes the item, its condition and valuation. Develop your own historical story to increase its value.

i. Arrange with your school band, orchestra, or choral director to permit you to be the conductor for a day. This includes caring for the music and the room as well as conducting.

j. Prepare a dictionary of new words you would like to introduce. Include a pronunciation guide as well as definition, and give an example in a sentence.

3. Food Services

a. Prepare a description of the following types of food services: Short-order, specialty, cafeteria, caterer, banquet, smorgasbord, canteen, coffee shop, cocktail lounge, fountain. Identify specialized skills related to each.

b. Role play customers and waiter/waitress. Set up several situations including: Customer dissatisfied with food or service; customer needing explanations of items on the menu; taking an order; hostess seating customers. Discuss personality traits needed for this job.

c. Prepare an observation sheet to be used when going to a food service. Include tasks performed by various employees, interrelatedness of jobs, and required personality traits.

d. Visit the school cafeteria. Interview the workers and observe their day's work.

4. Lodging Services

a. Prepare descriptions of the following: Hotel, motel, tourist home, YMCA, lodge.

b. Make a drawing to scale of a motel room which will accommodate a family of four. Remember space is costly. Privacy is important and maintenance should be minimal. Use metric measurements.

c. Get copies of brochures from major motel chains. Select a city for a visit and compute the costs for a family of two adults, one child age 10, one child age 14, and one child 19. Select one which is the most economical and/or one providing the most services deemed desirable.

d. Plan a field trip to a hotel or motel. Interview the manager, bellhop, clerk, and maid. Find out what they do and how tips affect salaries.

e. Make a diagram showing the interdependence of the workers preparing for a customer's stay in a hotel, include all personal services available.

2

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

CLOTHING MANAGEMENT, PRODUCTION AND SERVICE

PREFACE

Preparation in the area of clothing management, production, and services allows for a variation of choices, ranging from a part-time, one-person tailoring, dressmaking, mending, and alteration service to a large designing and manufacturing clothing industry which employs several hundred persons who perform certain very specific duties as a part of the whole industry. Some jobs may require fine motor skills as in designing garments, illustrating fashions, sewing, and operating and maintaining pieces of equipment. Other jobs may require gross motor skills as in handling large bolts of cloth and loading and shipping large orders. There are also jobs that require management skills, secretarial skills, and accounting skills. Jobs in this industry are available to both men and women. Despite technological advances in equipment, apparel manufacturing operations will continue to require much manual labor. Employment in this industry is expected to grow slowly in most areas.

One may choose to take a lower level entry job, and work one's way up to a more advanced position, or, one may choose to get advanced training at the post secondary level in textiles and then enter the industry at a higher level job where there is greater opportunity for advancement. There are also opportunities for volunteer and/or avocational occupations.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Choice means "making up one's mind" and there are certain situations where one can make choices.
2. Career plans should be designed and executed with the understanding that evaluation and re-planning may be necessary.
3. Occupations have their own work settings.

B. SUBJECT MATTER AREA RELATIONSHIP

1. Social Studies - Units on the process of clothing production as it relates to economics, the history of clothing styles and their relationship to the era being studied, and the psychology of personal choice of clothing.
2. Home Economics - Units on the study of clothing styles as related to the individual and to the occasions for which they are designed, clothing production (making a garment), and the care of clothing.

C. OCCUPATIONS

Industrial Production
- Designer
- Pattern maker
- Marker
- Industrial sewing machine operator
- Presser
- Sample maker
- Spreader
- Cutter
- Hand sewer
- Inspector

Custom Production
- Dressmaker
- Alterationist
- Tailor

Maintenance Services
- Alterationist
- Marker
- Dry cleaner
- Inspector/checker
- Spotter
- Counter clerk
- Washer
- Finisher
- Repairer
- Assembler/bagger

Fashion Services
- Fashion designer
- Bridal consultant
- Costumer
- Fashion coordinator
- Wardrobe specialty worker

Clothing Merchandising
- Textile designs
- Fur storage clerk
- Buyers in all the above areas
- Comparison shopper
- Customer service manager
- Stock person
- Sales analyst
- Store manager
- Market analyst
- Salesperson in: Orthodepic shoes, footwear, men's and boy's clothing, uniforms, women's and girl's apparel, leather goods, corsets, fashion accessories, furs, men's furnishings, infants' and children's wear, millinery

II. TEACHING STRATEGIES

A. GOALS

1. To identify the different kinds of work settings in the clothing management, production and service field.
2. To choose three occupations one might follow at sometime during one's life, and plan steps needed to prepare and enter those occupations.
3. To explain the decision-making process followed in choosing the three occupations in objective two.
4. To explore occupations in CLOTHING MANAGEMENT, PRODUCTION, AND SERVICE.

B. INTRODUCTORY ACTIVITIES

1. Discuss in class and list on the chalkboard as many kinds of work settings as the students can think of which use knowledge and skills in clothing management, production, and service.
2. Prepare ahead of time slips of paper on which are written problems involving clothing. A committee of students might plan for introducing this unit by preparing the slips of paper. Let students individually or in small groups, draw a slip. Allow a few minutes for study and planning, and then have students present the problem and solutions. Some activities might be:
    a. A student arrives at a party dressed in jeans and a t-shirt, and finds friends dressed in long dressed and suits, shirts and ties. How could this embarrassing situation have been avoided?
    b. A student gets up in the morning, selects clothes to wear to school, and finds that there is nothing clean to wear. How could this have been prevented?
    c. Discuss the differences in clothes one would wear to a football game and a basketball game.

   End this activity by having a class discussion about planning ahead of time the clothes to wear for a week, keeping in mind appropriateness for each occasion, and being sure that the garments are ready to wear, e.g., plan to take care of cleaning and repair, if necessary. Discuss the planning and decision-making processes used.
3. Prepare a time-line in relation to career planning. Discuss points at which plans would need to be evaluated and redesigned.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Develop a poster showing the various ways in which clothes worn for physical education may be laundered and mended. Stick figures representing mother, father, student, or other person may be shown washing the clothes at the laundromat, in the home washing machine, or by hand. A figure may be shown mending the clothes--shorts, shirt, socks--on a sewing machine, by hand, or by ironing on patches. Include care of the gym shoes. Pictures may be cut from magazines or catalogs, or pupils may

have other ideas for showing these activities. Make a presentation to the class, showing the poster and describing the activities.

2. Develop a time-line from junior high/middle school to retirement, showing steps to be taken in preparing for and embarking on a career. Plan for going to work right after high school, or going to college before going to work. Going to work, and then returning to school for further training should also be shown. Time for homemaking and child-rearing, then re-evaluating skills and knowledge in preparation for entry, or re-entry, into the work force could also be included.
3. Choose a work setting and find out what jobs are performed in that setting.
4. Plan and produce an article of clothing (e.g., hat, vest) on an assembly line method. Determine the cost of making the article and the price for which it would sell. Include wages for workers as well as cost of materials and equipment.
5. Prepare a presentation of styles of a particular period in history. Include the relationship of style of dress to the era studied and method of production.
6. Develop the personality of a hypothetical person; then describe the kind of clothes appropriate for that person.
7. Interview someone in the clothing industry, and ask specifically how that person selected that occupation.
8. Prepare a demonstration of simple clothing care.
    a. Spot removal
    b. Button sewing
    c. Hemming
    d. Patching
9. Prepare a display of different kinds of sewing needles with examples of their use.
10. Prepare a safety poster on the use of drycleaning plastic bags, drycleaning fluids and bleaches.
11. Prepare a display of materials with directions for cleaning.

3

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

INSTITUTIONAL AND HOME MANAGEMENT

PREFACE

One may find both personal and financial satisfaction within this area of occupations. Personal satisfaction may be found in meeting the needs of other people by maintaining well-cared for surroundings in which others work and/or live. Financial satisfaction will be determined by one's own goals and by a willingness to learn from on-the-job experience and/or further education.

One's level of education will determine where one enters this field as a paid employee. In institutional management, jobs range from a janitor's assistant to manager of a large hotel, hospital, school, or business. In home management, jobs range from part-time day workers to consultant service of the cooperative extension service workers and home economists. Some jobs require a college degree. An executive housekeeper or manager has responsibilities in a large organization for many employees and the services they provide. In smaller organizations, one person may manage the building and be responsible for upkeep of heating, air conditioning, plumbing, electrical service, and cleaning. At all levels of employment the ability to get along with other people is necessary.

The demand for Institutional and Home Management services is expected to grow about as fast as the average of all occupations to keep pace with population growth.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Career-oriented learning may take place in or out of school.
2. Earnings vary in and among occupations.
3. Completion of a worthwhile task has value for the worker and society.

B. SUBJECT MATTER AREA RELATIONSHIP

1. Mathematics - Units on measurement and computation of costs.
2. Language Arts - Units on reading care/use manuals.
3. Industrial Arts - Units on use of home maintenance tools.
4. Home Economics - Units on home management, equipment selection, use and care; housekeeping skills; and sanitation.

C. OCCUPATIONS

Home Management
- Housekeeper
- Household manager
- Home service representative
- Home economist
- Private household worker
- Homemaker aide
- Consumer consultant
- Cooperative extension service worker
- Homemaker

Institutional Management
- Janitor/janitress
- Specialty cleaner--carpet, furniture, windows
- Building assistant manager
- Contract building cleaner
- Building custodian
- Executive housekeeper
- Building manager

II. TEACHING STRATEGIES

A. GOALS

1. To identify in-school and out-of-school activities which contribute to the preparation for a career.
2. To identify factors which influence earnings.
3. To describe the values of the services provided to society by persons engaged in institutional and home management.
4. To explore occupations in INSTITUTIONAL AND HOME MANAGEMENT.

B. INTRODUCTORY ACTIVITIES

1. Ask the school custodian to talk with the class about job responsibilities, satisfactions, dissatisfactions, how job skills were learned, range of earnings for school custodians in the school district, and how advancement is made. Relate earnings to responsibilities.
2. Have students form small groups. Ask each group to discuss how a given school subject or out-of-school activities contributes to preparation for a career. Each group then presents a summary of its discussion to the entire class.
3. Discuss with the class the various factors which affect levels of earnings.
4. Ask someone who cleans houses for others to talk with the class about that kind of job.
5. Interview a parent who is a homemaker. Discuss training for the job, value to the family, frustrations and rewards.
6. Prepare a display of window cleaning agents. Discuss information needed to select one for purchase. Students may test some of the agents by cleaning classroom windows.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Role play an interview for a job as: A custodian in a four-unit apartment building; an executive housekeeper for a 100-unit motel; or a private household worker.
2. Role play a tenant and a custodian discussing a leaky faucet in the tenant's apartment.
3. Arrange to assist the school custodian for a day.
4. Visit and interview an executive housekeeper or building manager of a large motel, hospital or business.
5. Visit and interview a cooperative extension service worker who may be employed in agriculture or home economics.
6. Search for articles in newspapers and magazines for information which institutional or home management workers use in performing their jobs.
7. Prepare a presentation on home care and management. Consider:
    a. Responsibilities of family members for certain household tasks.
    b. Business skills needed to run a home,
        (1) How family records are stored, e.g., birth certificates, income tax returns and the records needed to pre-

pare those returns, use/care/repair manuals for household equipment, health records for each family member, insurance records, household inventory, financial inventory, bills to be paid, appointments with doctor, dentist, school teacher, music lesson, etc.

(2) Preparing income tax returns and filling out various forms

(3) Letter-writing

(4) Money management

(5) Others

c. Getting the most value for money spent, e.g., comparison shopping.

d. Managing the physical, mental, social, spiritual, growth and development of children in the family.

e. Planning for continuing growth and development of adults in the family.

f. Planning for retirement years.

8. Discuss with parents the costs of running a home and how income is provided.
9. Interview parents and grandparents, or persons of grandparents' generation about changing roles in family management. Compare and contrast roles of men and women as they were in earlier generations, as they are now, and as you think they may be in the future.

4

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

HOME FURNISHINGS, EQUIPMENT AND SERVICES

PREFACE

Careers in furnishings, equipment and services for homes and businesses involve working with people and with a product or products. Workers at lower levels of employment will be mostly involved with a product, as in construction of slipcovers or draperies, or in searching for certain products. Workers at higher levels, such as supervisors, shop owners,or interior designers will have a greater involvement with people, as in consulting with customers about products and services. Problem-solving skills are needed to help the customer with a decorating problem. Communication skills are needed to give information to other workers about what needs to be done and to convey to the customer suggestions to solve the problem. Planning and organizing skills are needed to keep the business running smoothly, each person doing the job well so that all parts of a decorating scheme fit together, and are done on time. Mathematics is used at every level, from the designer planning an entire lay-out, to other workers following directions in ordering materials, measuring; cutting, putting together to fit.

While lower level workers may advance to higher positions with more training and experience, most jobs, even beginning ones, require talent and professional training. The outlook for employment is affected by the general economy with much competition for employment in the beginning jobs. Some people are employed by large department stores or home furnishings stores. Others may own their own businesses. For owners, training and experience in business are necessary in addition to other talents and knowledge.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Most occupations require skill and knowledge in communications, mathematics, organization, and/or problem-solving.
2. Additional training and experience increase earning potential.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Language Arts - Units on communication skills.
2. Mathematics - Units on scales, measuring and figuring of costs.
3. Art - Units on design, color, texture, proportion and lighting.
4. Home Economics - Units on home furnishings, equipment and service.

C. OCCUPATIONS

- Interior Design
  - Shopper
  - Assistant decorator
  - Interior furnishings coordinator
  - Stockroom assistant
  - Junior designer
  - Interior decorator (designer)
- Home Furnishings Construction
  - Drapery construction specialist
  - Slip cover sewer
  - Home furnishings sewer
  - Drapery and upholstery estimator
- Other Occupations
  - Second-hand furniture dealer
  - Furniture appraiser
  - Salespersons in: Upholstery and furniture repair, custom drapery, floor coverings, house furnishings, curtain and drapery, furniture, hi-fi, gas or electric appliances, household equipment, radio and television parts, sewing machines, television and appliances
  - Appliance service supervisor
  - Floor-coverings estimator
  - Furniture inspector

II. TEACHING STRATEGIES

A. GOALS

1. To identify the requirements for achieving success in the area of interior design.
2. To describe skill requirements at various levels of employment.
3. To compare present abilities, interests,and values with those deemed necessary for success in a particular occupation.
4. To explore occupations in HOME FURNISHINGS, EQUIPMENT AND SERVICES.

B. INTRODUCTORY ACTIVITIES

1. Discuss skills needed by persons working in home furnishings, equipment and services. Relate those skills to subject matter areas, especially language arts, mathematics,and art.
2. Invite an interior designer or owner of a related business and a shopper, stockroom assistant or sewer to visit the class to describe and compare their jobs.
3. Hand out pictures of rooms decorated in different styles and periods. Identify and discuss the occupations of the people involved in preparing the rooms. Relate home decorating to individual tastes in furnishings and in clothing. Discuss how planning can save money, why home furnishing services are available, where they may be found, and who may utilize them.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Role play a discussion between a customer and a home lighting consultant about lighting to be installed in a house that is being remodeled.
2. Make presentations to the class following visits to: the home furnishings departments (furniture, linens, draperies, floor coverings, and appliances) of a department store; the office of an interior designer; a specialty shop which sells home decorating accessories; a re-upholstery or furniture refinishing shop. Identify skills required for each occupation.
3. Prepare a floor plan for any room in a house, according to scale, showing furniture arrangement. Take into consideration the purpose of the room, traffic flow, the balance of furniture placement, and lighting.
4. Cut pictures from magazines or catalogs to show furniture, floor coverings, window treatment (draperies, curtains, window shades, or other treatment) and accessories for the bedroom a student would like to have.
5. Figure how much carpeting and padding is needed for a room of a given size. Using catalogs or newspaper ads, determine the cost of the needed carpeting. Be sure to understand whether installation and padding are included in cost of the carpet.
6. Prepare two dioramas of a room, one which is well planned and coordinated and one which is not. Prepare a set of questions and answers to solve the identified problems.

7. Prepare a book of "Yellow Pages" which identifies where and what kind of services are available to customers in your community desiring aid in home furnishing, equipment and service.
8. Prepare a display of the specialized tools and materials used by a worker in home furnishings, equipment and services. Include swatches of materials, kinds of light bulbs, paint chips, hardware, special needles, hooks, wood finishes, special assessories, etc.
9. Find a picture of a room you would like to live in, and identify the accessories and their use. Decorating a room includes accessories for accent as well as use.
10. Prepare a display showing the rules for curtain and drapery length and width. (Catalogs and decorating magazines are good sources for this information.) Select a particular type of window shuch as a bay window, sliding glass door/window, or bedroom (double hung) window, and draw three curtain/drapery treatments which fit the rules.
11. Find illustrations of before and after rooms. Accenting or deemphasizing room features can be a challenge. Would you have done it differently? Be prepared to present to the class other ways the room could have been improved.
12. Prepare a display of "How to slipcover a chair". Invite a person who makes slipcovers to give a demonstration, or prepare a set of slides showing the various steps. Compute how much material is required and the cost of construction and any other costs.
13. Form a design team--interior designer, assistant designer, shopper, stockroom assistant, interior furnishings coordinator, lighting consultant, kitchen/bathroom consultant, or other team members desired. Have all the team members except the interior designer leave the room. A "customer" talks with the designer about a decorating problem. The "customer" leaves and the designer calls in the team and explains the problem. How does the team go about soving the problem and getting suggestions back to the customer?

5

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

HUMAN DEVELOPMENT SERVICES

PREFACE

For those persons with a strong interest in helping others, a career in the human development services should be seriously considered. These services include the specialities of child care, education, social welfare, and religion.

Education required for jobs in this area may range from a high school equivalency to advanced degrees from universities. An individual's ability to get along with people, a need to help others, and the desire and capability to improve skills, are the primary prerequisites.

Opportunities for employment in the human development services vary with the specialty. Employment outlook for educational and related jobs is limited. With the birth rate declining, fewer students are enrolled and many school districts are reducing teacher staffs. Outlook for jobs in the child care and social services areas is expected to be good with the need for these services increasing. There may be more competition for jobs at the higher levels. Many of the workers in human development services are employed by local, state, or federal governments.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. There is a relationship among interests, aptitudes, achievements, values, and occupations.
2. There is a universality of feelings and aspirations of all people-- regardless of physical appearance, nationality, creed, sex, or ethnic background.
3. Most people work, and there are many reasons why people work.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on psychology and sociology.
2. Home Economics - Units on child care and home management skills.
3. Health - Units on how to maintain one's own health.
4. Physical Education - Units on lifetime recreational skills.
5. Language Arts - Units on communication skills.

C. OCCUPATIONS

Child Care
- Child development aide
- Child development associate
- Preschool teacher
- Recreational specialist
- Child psychologist
- Day care parent
- Cottage parent
- Child development assistant
- Child development director
- Language development specialist
- Homemaker aide
- Foster parent
- Cottage director

Education
- Educational assistant (teacher (aide)
- Special education teacher
- Secondary teacher
- College/university professor
- Reading specialist
- Guidance counselor
- School psychologist
- Library technical assistant
- Librarian
- Early childhood education teacher
- Elementary teacher
- Community college instructor
- Educational administrator
- Speech and hearing specialist
- School social worker
- Library aide
- Media specialist
- Technical writer

Social Welfare
- Neighborhood worker
- Case work aide
- Case worker
- Day care licensing representative
- Employment aide
- Vocational counselor
- Family counselor
- Clinical psychologist
- Community worker
- Social service aide
- Social worker
- Child welfare researcher
- Social welfare agency director
- Employment counselor
- Marriage counselor
- Child psychologist

Religion

- Minister
- Priest
- Minister of religious education
- Educational assistant
- Director of preschool programs
- Director of music
- Director of evangelism
- Church administrator
- Church bookkeeper
- Deaconess
- Nun
- Chaplain
- Rabbi
- Director of religious education
- Associate in religious education
- Age-group specialist
- Teacher
- Minister of music
- Minister of evangelism
- Church secretary
- Church custodian
- Missionary
- Deacon

II. TEACHING STRATEGIES

A. GOALS

1. To identify interests, aptitudes, achievements, and values in relation to occupations under consideration.
2. To compare each student's own interests, aptitudes, achievements, values, feelings, and aspirations with those of other students.
3. To identify reasons why most people work.
4. To explore occupations in HUMAN DEVELOPMENT SERVICES.

B. INTRODUCTORY ACTIVITIES

1. Select and show a filmstrip or movie on getting to know oneself and others.
2. Explain "developmental tasks" and have a class discussion on identifying developmental tasks of adolescents. Then present information from Havighurst on his concept of developmental tasks. (Refer to supplement at end of unit.)
3. Conduct a class discussion on basic human needs. Then present information on human needs. (Refer to Part III of Planning Guide.)
4. Invite a social worker to visit the class to explain requirements of the job, its satisfactions and dissatisfactions. This person may describe other related jobs.
5. Choose partners, someone you don't know very well. Spend ten minutes getting acquainted with each other. Pupils then introduce their partners to the rest of the class, each taking only one minute. (It may be well to list on the chalkboard the things pupils would like to know about each other before the getting-acquainted period, in order that good use of time may be made of the ten minutes.)
6. Prepare for the personnel file the requirements for jobs in the human development services.
7. Have each student interview an adult for the following information. "What do you do in your spare time? What special skills do you have? What have been some of your greatest achievements? Are there some things you would like to achieve in the next ten years? Why do you work? What three things do you value the most? What are three things for which you would use a one thousand dollar bonus? What was your first job, what is your job now, and what would you like to be doing two to five years from now?" Discuss in class the responses in the interviews. Have students discuss in small groups the reasons why most people work. Do people have different reasons for working? Is this o.k.? Share information from each group with the class.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

Child Care:

1. Select a child of the age you would like to work with in a day care center. Prepare a box of items which

could be used in his physical, emotional, intellectual, psychomotor, and career development. Identify the purpose of each item and its possible effects.

2. Visit a day care center. Observe: (a) The children-their activities, needs, degree of independence, and relationship with other children and adults, (b) The adults-how they direct the children's activities, recognize and meet their needs, teach them to do things themselves, and help them learn to get along with each other.

Education:

1. Prepare a set of materials a counselor might use to help others make occupational choices.
2. Select a topic which you like to read. Go to the library and list the books in the collection. Borrow some selection tools from the librarian and prepare a list of materials you would recommend being added to the collection. Be sure you include an annotation, publisher, date,and cost of the materials, and processing.
3. Select a chapter in one of your textbooks. Prepare lesson plans to teach it. Select a method to get the interest of the students, prepare a lecture, suggest some student activities for involvement during class, select items for homework, prepare some type of evaluation. Indicate your method of grading the student activities, homework, and tests.

Social Welfare:

1. Prepare a case history of a student who would need the assistance of a social worker. Identify age, grade in school, academic and social problems in school, family life, relationship with peers, problems with the law. Give some recommendations which might be helpful to the student.
2. Make an appointment with an employment counselor at the nearest Illinois State Employment Service office. Ask for information about the counselor's job, and about the people with whom one works as an employment counselor. If possible, get a copy of the current list of job openings. Share this with the class along with what you have learned about an employment counselor's job.

Religion:

1. Look at religion-related occupations from two perspectives:

   a. Select a religion-related agency such as a home for the aging or for children, a hospital, school, publishing house, or a mission. Find out what occupations are needed in that agency, and which one seems best suited to your interests, aptitudes, and values.

   b. Select an occupation you think you would like and find out the religion-related agencies in which it occurs. What are the similarities and differences among the various agencies of the on-job activities of that occupation?

Activity B-2

Developmental tasks

Individuals, in order to move successfully from one stage of life to the next, need to accomplish the developmental tasks of each stage. This includes moving into the role of gainful employment. The following material has been adopted from Havighurst and Bossing and Cramer.

1. Achieving an appropriate dependence-independence pattern.	1. The junior high school student is beginning to establish independence from adults in all areas of behavior.
2. Achieving an appropriate giving-receiving pattern.	2. The junior high school student is learning to accept self as a worthwhile person. Giving-receiving patterns extend beyond family to teachers and peers.
3. Relating to social groups.	3. The junior high school student behaves according to a shifting peer code and experiences a need to belong.
4. Further development of the conscience.	4. The junior high school student is attempting to understand and internalize the mores of an adult society.
5. Learning one's psycho-socio-biological sex role.	5. The junior high school student, while strongly identifying with one's own sex is attempting to learn one's role in hetero-sexual relationships.
6. Developing an appropriate symbol system and conceptual abilities.	6. The junior high school student is in the process of moving from the ability to deal with only the concrete to the ability to deal with complex abstract concepts.

The student needs to be aware of these tasks and of progress in achieving them in relation to over-all growth, including career development. How important is independence, making one's own decisions on the job? Where does the student stand on the giving-receiving continuum in relationship to an eventual career choice? Does the student prefer to work alone, or with others? How important is conformity to the values and wishes of other persons and of society? What is the student's position concerning stereotyping of career roles? Does the student have the interests and abilities to be successful in a career that requires abstract conceptualization? The student needs a self perception of being able to make commitments and follow them through, to make changes when appropriate, and to see that work is not a separate part of life, but is woven throughout the entire fabric of life.

6

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

PROTECTION SERVICES

PREFACE

Protection service workers are needed to help safeguard the environment, human lives, and property. More than 950,000 workers, or one-tenth of all service workers, were employed in the protection service occupations in 1970. Law enforcers and detectives together account for more than one-third of the total number of protective service workers. Most are government employees but some work for hotels, stores, and other businesses. Guards make up another large group of protective service personnel and are employed chiefly by private companies to protect their property and enforce company rules and regulations. Others are employed in jails, prisons, and other government establishments. Firefighters are employed mainly by city governments. The remaining protective service workers are sheriffs, bailiffs, crossing guards, bridge tenders, marshalls and constables. State and federal protection service workers include FBI special agents, state police, immigration officials and national and state park conservationists. A new field in the protective services is that of environmental protectors. These workers deal with anti-pollution of the air, water, and soil, and industrial health. Employment in the Protection Services area grows with population growth and the availability of funds.

The protection services have become a very specialized and needed occupational cluster because of the way our society has evolved. Workers in this area have many decision-making situations requiring skills in making decisions and projecting the effects of those decisions. This occupational area provides opportunities to observe how decisions can cause chain reactions.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Decision making can precipitate chain reactions.
2. Specialized occupations result in an interdependent society.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social Studies - Units on the community.
2. Science - Units on environmental control.

C. OCCUPATIONS

Law Enforcement, Probation and Correction
- Traffic warden
- Law enforcer
- Police photographer
- Detective
- FBI special agent
- Bailiff
- Sheriff
- Matron
- Prison warden
- Youth officer
- Parole officer
- Social worker
- Criminologist
- U.S. marshall
- Law clerk
- Legal administrator
- Correctional case worker
- Meter maid
- Radio dispatcher
- Laboratory technician
- State police trooper
- Secret service agent
- Jailer
- Guard
- Social worker
- Pre-release coordinator
- Probation officer
- Vocational counselor
- Armed forces police
- Criminalist
- Judge
- Attorney
- Cottage parent
- Penolgist

Fire Safety
- Fire alarm dispatcher
- Pump operator
- Fire prevention specialist
- Fire inspector
- Fire safety supervisor
- Fire insurance adjuster
- Firefighter
- Fire investigator
- Fire marshall
- Plant protection inspector
- Fire insurance inspector

Environmental Safety
- Air pollution control worker
- Air monitoring technician
- Air pollution control engineer
- Public health engineering aide
- Sanitarian
- Water quality chemist
- Sanitation aide
- City planner
- Regional planner
- Industrial hygienist
- Radiation monitor.
- Smoke tester
- Air pollution control meteorologist
- Wastewater disposal worker
- Water and waste treatment plant operator
- Public health bacteriologist
- Surveyor
- Zoning inspector
- Architectural engineer
- Systems safety analyst

II. TEACHING STRATEGIES

A. GOALS

1. To project the chain reaction which will follow a given decision.
2. To explain why society has developed protective service occupations and how the members of society have become dependent on them.
3. To explore occupations in PROTECTIVE SERVICES.

B. INTRODUCTORY ACTIVITIES

1. Discuss whether homes, businesses, and industries are equipped to protect themselves from criminals, fire, and pollution (include waste water and garbage). Discuss how people depend on the protective service people and how protecting oneself individually evolved into specialized protective occupations.
2. Trace the chain reactions from the moment a distress call is made to the police department to solving the problem. Relate this to the chain reaction to a student's career choice--include reaction of parents, peers, instructional staff. Consider events that will possibily occur because of the choice. Include economics, lifestyle, marriage etc.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Make a collection of your friend's fingerprints, using a black ink pad. Make notes of special characteristics. Refingerprint some of your friends and try to match them with your print file.
2. Study people in your school. Make a file of drawings of the shapes of heads, noses, eyes, mouths, and other outstanding features. Have some one unknown to the group pose as a criminal. Have the witnesses identify the criminal through a composite drawing made from your file.
3. Interview the protective service workers at your school. Find out what the special requirements are for working in this setting.
4. Conduct a fire safety survey, using materials from your local fire department. Find out what the special requirements are for working in this field.
5. Watch a television program featuring the police department. Identify the various occupations needed to operate a police department. Record the kinds of decisions made by the major characters, and trace the chain reactions that follow.
6. Ask your local police department for some of the forms used when investigating an accident. With some of your classmates, stage an accident in the class, then gather evidence and write up a report.
7. Make a list of the items found in a waste basket at home or school. What happens to these items? Are they all disposed of in the same manner? How do they affect the environment

when they are dispersed? Identify some of the environmental protection laws regulating the disposal of waste materials

8. Use a tape recorder and tape the sounds in various settings--at home in the kitchen, in the school classroom and hall. Tape the noisest time and the quietest. What sounds are most jarring? Could they be eliminated?
9. Coat several glass slides on one side with baby oil. Place the slides in different areas at home, school, inside and outside. Make comparisons of the color and particles which cling to the oil after twelve hours, twenty-four hours, four days.
10. Make a list of items which are now disposable but a few years ago were made of non-disposable materials. What problems have been generated by the disposable items? Make a diagram showing the chain reactions which will occur if gym clothes and towels were to be disposed of after each class.
11. Make a survey of water usage at home, in school, or at a business. Is water wasted? How can this wastage be curbed?
12. Develop a brochure describing how a tentative career choice you have made is related to the environment and how it can help protect the environment.
13. Make a tentative career decision. Identify how that decision will affect the courses you take, how soon you will seek employment in the chosen field, how the choice will affect your lifestyle and economic position.
14. Describe a situation in which the protective services workers are protecting you.
15. Make two columns on a sheet of paper. Title one FOR and one AGAINST. Categorize your reasons for selecting and not selecting a career in the protective services.
16. Prepare a presentation describing ways each individual can help protect the environment.

7

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

TRANSPORTATION

PREFACE

Transportation offers a wide variety of career opportunities. Most workers drive trucks and buses, operate trains and ships, fly aircraft,or keep the equipment in working order. As the economy expands and the population grows, demand for transportation workers will increase.

Variances in types of transportation require different skills based on common reading, mathematics, geography, economics, science competencies. As in any occupation there are pleasant and unpleasant tasks which may be different from one worker to another.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Things change and these changes influence the choices and decisions one makes.
2. Interests and abilities mature and change as well as one's physical being.
3. The individual determines which aspects of an occupation may be pleasant or unpleasant.

B. SUBJECT MATTER AREA RELATIONSHIP

1. Science - Unit on machines.
2. Social Studies - Unit on transportation.
3. Math - Unit on computation of weights, mileage, taxes, etc.

C. OCCUPATIONS

Air Travel Occupations
- Baggage handler
- Ground crew
- Traffic agent
- Air traffic controller
- Flight dispatcher
- Pilot
- Ticket agent
- Public relations representative
- Program merchant
- Airframe and power mechanics
- Radio technician
- Ticket clerk
- Radio operator
- Flight attendant
- Co-pilot
- Reservation's agent
- Air freight agent
- Personnel representative
- Research analyst
- Maintenance inspector
- Instrument technicians

Water Travel Occupations
- Dock worker
- Able seaman
- Deck utility assistant
- Wiper
- Fire water tender
- Ship's electrician
- Purser
- Radio officer
- Engine department (chief engineer, first assistant engineer, second assistant engineer, third assistant engineer, deck officer)
- Ordinary seaman
- Boatswain
- Ship's carpenter
- Oiler
- Deck/engine mechanic
- Steward's department (chief steward, chief cook, assistant cook, utility servicer, mess officer)
- Chief mate
- Second mate
- Third mate
- Ship's captain

Land Travel Occupations
- Braker
- Conductor
- Parking attendant
- Local transit busdriver
- Local truck driver
- Locomotive firer
- Locomotive engineer
- Taxi driver
- Intercity busdriver
- Long distance truck driver

Land Travel Occupations Cont'd.

- Porter
- Ticket agent
- Road bed maintenance
- Claims adjuster
- Mechanic
- Parts-order clerk
- Warehouse manager
- Router
- Freight agent
- Docker
- Dispatcher
- Material handlers

II. TEACHING STRATEGIES

A. GOALS

1. To illustrate the changes in transportation occupations from 1850 to the present, including the increase in the occupations associated with the mode at three time periods.
2. To list in chronological order past career preferences, and reasons for discarding the choice.
3. To select one occupation listing three pleasant and three unpleasant aspects and then comparing with other students for differences of opinion.
4. To explore occupations in TRANSPORTATION.

B. INTRODUCTORY ACTIVITIES

1. Construct a transportation time line with points at 1850, 1910 and 1970. Identify changes in modes of travel and occupations.
2. Construct a survey instrument for students to gather data on themselves, parents, and friends to conclude that people change their occupational choice many times before making their present choice. Record data on number of choices made in the transportation cluster. Discuss reasons for changes in occupational decisions.
3. Discuss activities conducted in school. Categorize them as pleasant or unpleasant. Solicit reasons for differing opinions. Apply discussion to the work world.
4. Prepare a career autobiography. Interview parents to find out what each student wanted to be at an earlier age and why they think they made that choice. Follow with other choices and identify the influences that helped you change your mind or continue with a particular choice. Add this information to your personnel file. (See suggested form at end of unit.)

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a mural depicting the changes in transportation. Be able to explain how these changes occurred, why, and how they affected occupational training.
2. Research the history of a transportation occupation. Identify points when and why tasks became specialized occupations.
3. Make a list of the different types of trucking in your community. Use the yellow pages of your telephone book. Prepare a survey to find out distances covered, kinds of materials trucked, responsibilities of drivers, uses of math in the industry, and where the metric system is being implemented.
4. Outline the route for trucks to deliver goods. Use a map most appropriate for city deliveries, state, and interstate. Ask a classmate to find on your map the delivery points and routes to be traveled.
5. Prepare a fee chart for a taxi cab driver. Use local rates. Include costs for extra passengers.

6. Prepare a diagram showing the responsibilities of a ship's basic crew. Identify crew members needed for cargo ships, cruise ships, and tug boats.
7. Find a map with railroad lines. Identify those that carry passengers and those which carry freight in your area. Identify occupations used in each type of train.
8. Prepare a display of railroad cars and equipment. Identify where the various workers work and what their responsibilities are.
9. Visit an airport, dock, or railroad station. Find out the destinations of people and goods. Prepare a map showing where transfers to other lines are made to reach a chosen destination.
10. Identify how the lifestyle of a trucker, airplane crew or ship's crew would be different from a teacher, grocer, or newspaper writer.
11. Prepare a chart showing the many ways geography and math are used in transportation careers.
12. Interview three people who have the same occupation. Compare and contrast the lists of pleasant and unpleasant tasks identified by each worker.
13. Prepare a triptych which would illustrate the growth of transportation careers since 1850.
14. Write a short essay explaining why so many children pretend to be pilots, engineers, or boat captains, yet few select the occupation for a career.
15. Select an occupation you are most interested in and list in two columns what you think you would like best about the job and what you would like least. Explain why the unpleasant tasks would keep you from preparing for the career or why the pleasant tasks would overshadow the unpleasant tasks and encourage you to pursue this career.

NAME ______________________

Activity B-4

CAREER AUTOBIOGRAPHY

Career Choices	Influences				
	Family	Peers	Career Information	Interests	Abilities
Pre-School Age					
Elementary School Age					
Junior High/Middle School Age					
High School Age					
Adulthood					

8

OCCUPATIONAL CLUSTER
PERSONAL AND PUBLIC SERVICES

GOVERNMENT SERVICES

PREFACE

Government service provides one out of every six employed persons with a job. Federal employees work in occupations that represent nearly every kind of job in private employment, as well as others unique to the federal government such as postal clerks, regulatory inspectors, foreign service officers, internal revenue officers, and the military. Two-fifths of all government workers in 1973, or 5.9 million, provided educational services in elementary, secondary, junior and senior colleges. About 1.1 million worked for Federal agencies concerned with the national defense and international relations. Seven hundred thousand worked in the postal service and four hundred thousand worked in the national resources field such as the National Park and Forest Service.

The long range trend in government employment has been steadily upward. Much of this growth is due to increasing demands for additional services for the general welfare. Working for such a large company as the Federal Government can be different from working in a small private corporation. Having the coping skills to adapt to change and the ability to make changes in the environment are important skills wherever one chooses to work.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. People change and these changes influence the choices and decisions one makes.
2. A given work setting requires certain policies and procedures.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Social studies - Unit on functions of government and government service.
2. Language arts - Unit on communications.

C. OCCUPATIONS

Building inspector
Public way inspector
City planner
Inspector of weights and measures
Legal aide
Public librarian
Document examiner
Electrical inspector
Meat and poultry inspector
Sanitarian
Immigration inspector
Customs inspector
Mine inspector
Alcohol inspector
Firearms inspector
Foreign service officer
Postmaster/mistress
Social insurance administrator
Law enforcer
Health inspector
Postal inspector
Radio and radio code specialist
Infantry man
Seamanship specialist
Radar operator
Driver's licensing examiner
Mail distribution scheme examiner
Weather clerk
Directory clerk-mail
Parcel post clerk
Registered mail clerk
Code enforcement inspector
Commissioner
Dairy/food inspector
State's attorney
Civil rights commissioner
Human relations officer
Arson investigator
Narcotics inspector
Mechanical inspector
Agricultural inspector
Agricultural commodity grader
Aviation safety officer
Wage-hour compliance officer
Tobacco inspector
Internal revenue officer
Postal clerk
Conservationist
Criminal investigator
Fire fighter
Mail carrier
Military personnel
Military intelligence specialist
Field artillery crew member
Sonar operator
Legislator
Tax technician
Court clerk
License clerk
Process server
Meteorologist
Rural mail carrier

II. TEACHING STRATEGIES

A. GOALS

1. To describe how people change and how these changes affect career choice and job satisfaction.
2. To identify policies and procedures required in a work setting.
3. To identify jobs that are unique to government service and those that are similiar to jobs in private enterprise.
4. To explore occupations in GOVERNMENT SERVICES.

B. INTRODUCTORY ACTIVITIES

1. List policies and procedures established for students in the school setting. Discuss how they are similar to those in industry, government, and business. Emphasize the effects on the workers.
2. Discuss Civil Service requirements and fringe benefits of the government worker. (See the Occupational Outlook Handbook for details.) Have students interview parents to find out requirements for joining the company in which they are employed and the fringe benefits. Do some comparing and contrasting.
3. List the various careers found in government service. Categorize them as those unique to the government and those which are also found in private enterprise. Discuss why some occupations are found only in government service and what would happen if they were in the private domain.
4. Identify how students change and how these changes affect attitudes toward school, family, and career choices. Discuss what makes people feel satisfied or dissatisfied with jobs and themselves.

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Select one of the government occupations and compare that position with a similar one in private industry. What differences are there in environment, responsibilities, and policies? Are there similarities?
2. Prepare a chart of the workers in your community who are on the government payroll.
3. Call the U. S. Government Civil Service Commission, which is listed in your phone book with a toll free number, for application forms and career pamphlets. Compare the application forms with those from other businesses.
4. Research the purpose and duties of inspectors. Identify where they get the rules they are to enforce. What would be some of their major problems?
5. Prepare a mural tracing the routes of mail from the time it is mailed until it is delivered. Indicate the different workers and the types of environment in which they would work. Are there any ways the worker can change the work environment while continuing to do the same tasks?

6. Select one of the U.S. armed forces and identify experiences and training programs which could be transferred into civilian life. Explain how a career in the armed forces would be alike and different in a similar career as a civilian. Describe how the environment could be changed in a military career.
7. Visit a driver's license examiner and find out what training and experience are required for the job, what the duties and responsibilities are, and how the environment changes within the course of an examination. Find out all the kinds of vehicles for which licenses are required, i.e., privately owned autos, taxicabs, trucks of different kinds, motorcycles, etc.
8. Select a field where government regulates by means of licensing. Find the following data: Location of inspection, nature of inspection, consequences of non-compliance, procedures to make corrections, recommendations for future evaluation.
9. Interview workers to find out if their work setting would change if they were promoted or if they changed organizations. Also inquire as to ways their working environment could be changed to make working conditions more pleasant.
10. Debate the following issue: Resolved: All government work should be done by private enterprise.
11. Select an occupation of individual interest and list the settings where this occupation could be found.
12. Write a short essay on the limitations on personal freedom when one accepts a government position regulated by civil service.

9

OCCUPATIONAL CLUSTER

PERSONAL AND PUBLIC SERVICES

PERSONAL SERVICES

PREFACE

The Personal Services Cluster is primarily concerned with providing personal improvement to individuals on a one-to-one basis. Barbers and cosmetologists must have fine finger dexterity, a sense of form and artistry, and the physical stamina to stand for long periods of time.

Providing services for others demands positive attitudes and a liking of people. Client satisfaction leads to additional financial and personal reward.

Some Personal Services businesses provide a comprehensive service, others only one. Some businesses are owned and operated by one person, others have many workers with managerial positions. The employment decline is expected to level off in the mid 1980's as population growth and increasing popularity of hair styling offset the effect of the fashion for longer hair.

I. INSTRUCTIONAL INFORMATION

A. CAREER DEVELOPMENT FOCUS

1. Certain identifiable attitudes, values, and behaviors enable one to obtain, hold,and advance in a career.
2. Work involves the acceptance of responsibility for a task.

B. SUBJECT MATTER AREA RELATIONSHIPS

1. Health - Units on grooming.
2. Home Economics - Units on Personal Services.
3. Art - Units on design and color.

C. OCCUPATIONS

Personal Services
- Shampoo worker
- Manicurist
- Cosmetologist (beauty operator, hairdresser, beautician)
- Instructor
- Beauty shop manager/owner
- Barber
- Hair stylist
- Barber shop manager
- Scalp treatment operator
- Make-up supervisor
- Wig dresser

II. TEACHING STRATEGIES

A. GOALS

1. To explain the effect of a responsible and/or non-responsible person on others.
2. To identify interests and skills applicable to a PERSONAL SERVICES career.
3. To illustrate how the behavior of persons in a PERSONAL SERVICES career will affect customers.
4. To explore occupations in PERSONAL SERVICES.

B. INTRODUCTORY ACTIVITIES

1. Invite a barber and/or beauty shop manager/owner to the classroom. Prepare interview questions in advance. Emphasize what one must do to obtain, hold, and advance in a job.
2. In role-playing form react to the following: Include effects of an irresponsible employee on other employees and the business:
    a. Hair stylists are to keep their tools in their own stations and sweep their floor areas after each cutting.
    b. Tips will be pooled and divided among all employees.
3. Discuss traits of workers which encourage customers to return to a business. Consider barbers, clerks, salespersons, beautician.
4. Compile a list of responsibilities assumed by the average middle school student. Have each student rate the level of responsibility for that task and state the effects on self and others when the responsibility is not carried. (See supplement at end of unit.)

C. INDIVIDUAL AND/OR SMALL GROUP ACTIVITIES

1. Prepare a box containing tools and materials used by a barber or beautician and manicurist. Using a wig or a fellow student, practice setting and combing out hair and giving a manicure.
2. Prepare a display of various kinds of shampoo and hair conditioners describing the purpose and value of each.
3. Prepare a book of facial shapes and problems. Include make-up tips for enhancing the natural beauty.
4. Prepare a chart of men's hair styles appropriate to lifestyle and face.
5. Visit a beauty or barber shop and interview the workers in each area. Be sure to find out how they handle dissatisfied customers and what kinds of attitudes and behavior help them to be successful in their jobs.
6. Give a demonstration on how to give a manicure.
7. Visit a beauty or barber school. Find out what kinds of courses one must take and the educational prerequisites which will aid in satisfactory completion of the course.

NAME ____________________

Activity B-4

WORK INVOLVES THE ACCEPTANCE OF RESPONSIBILITY FOR A TASK

Responsibilities	Always Complete	Usually Complete	Sometimes Complete	Rarely Complete	Never Complete	Not my Responsibility	Effects on myself and/or others when the task is not completed.
1. Doing homework.							
2. Getting to school on time.							
3. Getting to class on time.							
4. Returning library books.							
5. Having clean P.E. clothes.							
6. Having pencil and paper							
7. Getting home on time.							
8. Doing chores on time.							
9. Reminding myself to complete tasks.							
10.							
11.							
12.							
13.							

III.

BIBLIOGRAPHY

TABLE OF CONTENTS

Preface 275

Comprehensive Reference Sources 276

Applied Biological and Agricultural Occupational Cluster 279

Business, Marketing and Management Occupational Cluster 296

Health Occupational Cluster 313

Industrial Oriented Occupational Cluster 330

Personal and Public Services Occupational Cluster 353

Career Guidance 388

Different Skills for Different Tasks 393

Professional Resources 396

Publishers 399

Preface

A bibliography can serve several purposes. The major purpose of this bibliography is to identify books, audio-visuals, pamphlets, and sources of free and inexpensive materials which can provide occupational information needed by teachers and students. In order to make this bibliography become a localized resource tool it is important that the librarian use the guide to identify the materials already in the collection, to identify materials for future purchases and to develop a local bibliography for students and teachers in the district.

Because a career exploration program is a community oriented program, this bibliography should be expanded to contain a Local Resource File, based on the materials suggested on page forty-one. The forms should be interfiled according to the occupational units in which the resource would be most appropriate. It is important that the bibliography include information on locally developed materials and their location. This information should also be filed under local resources. This listing should include student developed materials which are to be filed in the library and teacher developed units and materials which may be housed in specific classrooms.

1

COMPREHENSIVE REFERENCE SOURCES

Books and Periodicals

An Annotated Bibliography of Instructional Materials in Cooperative Occupational Education. Harris, E. Edward. Northern Illinois University. Illinois Office of Education. 100 N. First St., Springfield, Il. 62777.

B'nai B'rith Career and Counseling Services. 1640 Rhode Island Ave., NW, Washington, D. C. 20036.

Career Index. Chronicle Guidance Publications, Inc. 1974.
Compilation of over 700 sources of occupational, educational, and professional information.

Career World Magazine. 501 Lake Forest Ave., Highwood, Il. 60040.
$3.50 per student. Minimum order 15 subscriptions.

Classified Index of Industries and Occupations. U. S. Bureau of the Census. U. S. Government Printing Office. Washington, D. C. 20402. 1971.
Contains 19,000 industry and 23,000 occupation titles which represent a comprehensive listing of specific industries and occupations developed historically and maintained continuously by review.

The College Blue Book and The Blue Book of Occupational Education. Russell, Max. Macmillan Co. 1973.
The College Blue Book lists admissions procedures, describes the schools' communities, includes state maps, features tabular data, and covers over 3500 American schools. The Blue Book of Occupational Education provides detailed information on 12,000 trade, technical, business, and other occupational schools, covering admissions policy, tuition costs, certificates awarded, accreditations and approvals.

Concise Handbook of Occupations. Costell, Joan M. and Wolfson, Rita. J. G. Ferguson Publishing Co. 1975.
Contains information on over 300 jobs ranging in educational requirements from an eighth grade certificate to a Ph.D. The occupations, listed alphabetically, are coded according to prime interest (people, data, things) and accompanied by photographs of work situations.

Dictionary of Occupational Titles. U. S. Employment Service. U. S. Government Printing Office. Washington, D. C. 20402.
Contents: v1 Definitions of titles; v2 Occupational classification and industry index. Supplement 2 to the Dictionary of Occupational Titles: Selected characteristics of occupations by worker traits and physical strength.

Encyclopedia of Careers and Vocational Guidance, Volume One: Planning Your Career. Doubleday and Co., Inc. 1972.

Written by recognized leaders in their fields, each article describes the nature and basic functions of that field, gives a brief history, discusses present developments, trends and future outlook, defines the areas of opportunity and general prospects for employment and advancement. At the end of each article is a glossary and cross references to specific occupations in Volume Two: Careers and Occupations. This volume includes specific facts about over 650 occupations, following the Dictionary of Occupational Titles (DOT).

Guide to Local Occupational Information. U. S. Dept. of Labor. 1973.

Provides information for jobseekers and vocational counselors.

Lovejoy's Career and Vocational School Guide. Lovejoy, Clarence. Simon and Schuster. 1973.

Occupational Brief Library. Finney Co.

Occupational Literature. The H. W. Wilson Co.

An annotated bibliography of books, charts, posters, pamphlets, and periodicals.

Occupational Outlook Handbook--Yearly Edition. U. S. Dept. of Labor. U. S. Government Printing Office. Washington, D. C. 20402.

Introductory sections tell how to use the Handbook, where to go for more career information, how employment projections are made, and where tomorrow's jobs will be. Includes 300 occupational briefs, grouped into 1[illegible] clusters of related jobs; 35 industry briefs; index of job titles by DOT code; instructions for ordering Handbook reprints, the Occupational Outlook Quarterly, and other BLS publications which will keep you informed about the economy and the job market.

Occupations. Blakely, Caroline. New Readers Press.

Reading level 3-4. A guide to careers in service, service in government, paraprofessional, clerical, hotel and restaurant, driving and skilled manual occupations.

Popeye Career Awareness Library. King Features. 1973.

Fifteen comic-style books describe career fields such as manufacturing, transportation, communications, construction, personal and public services, recreation, natural resources, and agriculture. Includes posters and job description cards. $9.75.

Audiovisuals and Kits

Acoustifone Career Exploration Program. Imco. 1974.

Self-administering program which may be used by counselors, teachers, librarians, administrators, or nonprofessionals. Includes 20 kits, each containing six self-teaching sound filmstrips, a supply of student interest inventory sheets and two counselor keys to be used as an aid in guidance. The 20 topics covered are: Clerical

Occupations; Municipal Law Enforcement; Repair and Maintenance; Automotive Repair; Commercial Aviation; Occupations in Ecology; Data Processing; Food Services; Printing; Plastics, Forming and Design; Public Utilities; Metal-working; Public Service; Personal Service; Building Trades; Electronics; Business Equipment Repair; Trucking; Sales; Graphic Services.

Careers in Focus Series. McGraw-Hill Book Co.
Titles of books in the series are: "Exploring Occupations in Engineering and Manufacturing," "Exploring Occupations in Agribusiness and Natural Resources," "Exploring Marketing Occupations," "Exploring Health Occupations," " Exploring Transportation Occupations," "Exploring Occupations in Science, Fine Arts, and Humanities," "Exploring Occupations in Communication and Graphic Arts," "Exploring Occupations in Electricity and Electronics," "Exploring Business and Office Occupations," "Exploring Occupations in Public and Social Services," "Exploring Occupations in Personal Services, Hospitality, and Recreation," Exploring Occupations in Food Service and Home Economics," "Exploring Construction Occupations," "Discovering You."

Career Information Kit. Science Research Associates.
Approximately 600 pieces of current literature meeting NVGA guidelines alphabetically filed by job families. Easy reference to specific job titles. Includes 1 How to Use It, 20 Instruction Sheets, 1 Index, and 1 set of imprinted file folders.

Job Experience Kits. Science Research Associates.
Work-simulation experiences in 20 representative occupations. May be used individually or on group basis. Includes pad of 30 answer sheets and a User's Guide in each kit on the following occupations: Accountant, appliance serviceman, auto mechanic, beautician, carpenter, designer, draftsman, electronics technician, elementary school teacher, police officer, salesperson, secretary, truck driver, veterinarian and X-ray technician.

People at Work. King Features. 1975.
Six filmstrips-cassette featuring Popeye and Sweetpea and accompanying booklets for the following topics: The Bakery, Bubble Gum, The Comic Book, the Filmstrip, The Newspaper, and Toys and Dolls.

Selected Professional Careers. Cassette tape program. Educational Research, In[illegible]

OCCUPATIONAL CLUSTER: 2

APPLIED BIOLOGICAL AND AGRICULTURAL

General

Books, Pamphlets and Periodicals

"Agribusiness." *Career World*. Vol. 2, No. 9 . (Mid-May 1974): 4-15.

The American Farmer Magazine. 225 Touhy Ave., Park Ridge, Il. 60068.

Canada Department of Agriculture. Head, Distribution Unit Information Division. Room 139, Sir John Carling Bldg., Central Experimental Farm, Ottawa, Ontario, Canada.

Career Opportunities: Agricultural, Forestry, and Oceanographic Technicians. Sidney, Howard. J. G. Ferguson Publishing Co., 1974. $9.20 postpaid.

Careers in Agribusiness and Industry. Stone, Archie A., Grades 9-12. Interstate Printers and Publishers, Inc. 1970.

"Careers to Feed a Hungry World." *Career World*. Vol. 4, No. 1. (September 1975): 4-18.

Exploring Agribusiness. Roy, E. P. Grades 9-12. Interstate Printers and Publishers, Inc. 1975.

Exploring Occupations in Agribusiness and Natural Resources. Curtis, Samuel M., and Mercer, Robert J. Gregg Division. McGraw-Hill Book Co. 1976.

Farm Journal. Washington Square, Philadelphia, Pa. 19100.

Feeding the World of the Future. Hellman, Hall. Grades 7-9. J. B. Lippincott Co. 1972.

Jobs in Agribusiness. Houlehen, Robert J. Grades 6-12. Wm. Morrow and Co.

Nation's Agriculture. 225 West Touhy Ave., Park Ridge, Il. 60068.

To Feed a Nation: The Story of Farming in America. McCoy, J. J. Thomas Nelson, Inc. 1970.

U. S. Dept. of Agriculture. Agricultural Research Center. Educational Services Branch. Beltsville, Md. 20705.

U. S. Dept. of Agriculture. Farmer Cooperative Service Publications. Washington, D. C. 20250.

U. S. Dept. of Agriculture. Office of Information. Publications Division. Washington, D. C. 20250.

Your Future in Agriculture. Richards Rosen Press, Inc. $4.20.

Audiovisuals

Careers in Agriculture. Sound filmstrip. Pathescope Educational Films, Inc.

Careers in Biological Sciences. Posters. Grades 7-12. J. Weston Walch, Publisher.

Careers in the Sciences. Cassette tape program. Grades 5-12. Educational Research, Inc.

Farming. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Is a Career in Agri-Business for You? Film. Counselor Films, Inc. 1975. Runs for 14 min. Write for preview information.

Free and Inexpensive

The American Farmer. Film. Modern Talking Picture Service. 1974. Funs for 28 min. Depicts a farmer's contributions to our way of life. Free on loan.

"Career Opportunities in Agricultural Engineering," "Wanted: More Women Engineers in Agricultural Engineering," "How to Recognize a Potential Ag Engineer," "Career Opportunities in Agriculture," "Engineers Making Important Things Happen--Perceptioneering," "Engineering--A Better Environment," "A Future in Food Engineering," "Engineering Careers in the World's Largest Industry." American Society of Agricultural Engineers. 2950 Niles Rd., St. Joseph, Mi. 49085. Single copies free.

IH Farm Report: Agriculture at a Crossroads. International Harvester Co., 401 N. Michigan Ave., Chicago, Il. 60611. Single copy free.

"Careers in Agriculture: Your Opportunity." Webb Co. Send 50¢ for a 69-page booklet prepared by The Farmer.

Two for Fox...Two for Crow. Film. Modern Talking Picture Service. 1972. Runs 16 min. Shows scientific research attempts to reduce crop damage and protect the health of livestock. Free on loan.

Local Resources

Animal Production Occupations

Books, Pamphlets and Periodicals

Aim for a Job in Cattle Ranching. Arnold, Oren. Richards Rosen Press, Inc. 1971. $4.80.

American Association for Laboratory Animal Sciences. 2317 W. Jefferson St., Suite 208, Joliet, Il. 60435.

American Association of Equine Practitioners. Rt. 5, 16 Hillcrest Circle, Golden, Co. 80401.

Biography of a Bee. Smith, Harry. G. P. Putnam's Sons. 1970.

Brown Swiss Cattle Breeder's Association. P. O. Box 1028. Beloit, Wi. 53511.

Careers in Agribusiness and Industry. Stone, Archie. Interstate Printers and Publishers, Inc. 1970.

Jimmy of Cherry Valley. Rau, Margaret. Julian Messner. 1973.

"Jobs with Horses." Career World. Vol. 3, No. 5. (January 1975): 16-17.

Opportunities in the Biological Sciences. Winter, Charles. Vocational Guidance Manuals. 1970.

Opportunities in Veterinary Medicine. Swope, Robert. Vocational Guidance Manuals. 1973.

Raising Small Animals for Fun and Profit. Villiard, Paul. Winchester Press. 1973.

Zoo Careers. Bridges, William. Wm. Morrow and Co., $4.95.

Audiovisuals

Family Living Program. Filmstrips and cassettes. Scholastic Book Services. 1975.

Unit 1--The Individual. Unit 2--Partners. Unit 3--The Family.

Focus on America--The Midwest. "North Dakota: Are Subsidies Necessary?" Society for Visual Education.

Explores agricultural mechanization and crop subsidy through the life of a wheat farmer and his family.

Focus on America--The Near West Region. "Texas: Land of Cattle and Oil." "Colorado: Agricultural Technology." Society for Visual Education.

Profiles two specialized industries with emphasis on advanced technology, and technology in the feedlot raising of cattle.

Focus on America--the South. "Southern Appalachia: An Area Left Behind." "The Cajuns: A Fading Culture." Society for Visual Education.
Title 1 includes a West Virginia dairy farmer. Title 2 views the life and work of a crawfish rancher.

Free and Inexpensive

American Farrier Association. Box 695, Albuquerque, N. M. 87103
Enclose stamped, return envelope for single free copy of vocational schools that teach horseshoeing.

American Horse Council. 1776 K St., NW, Washington, D. C. 20006.
Send for single free copy of colleges, universities and vocational schools offering instruction in horse studies.

American Horse Shows Association. 527 Madison Ave., New York, N. Y. 10022.
Send for single free copy of list of riding instructor schools.

"Careers in Animal Biology." American Society of Zoologists. California Luthern College, Box 2739, Thousand Oaks, Ca. 91360.
Enclose stamped, self-addressed size #10 envelope.

"Careers in Biology." American Institute of Biological Sciences. 3900 Wisconsin Ave., NW, Washington, D. C. 20016.

"Careers in Poultry Science." Poultry Science Association. Dept. of Poultry Science, Texas A & M University. College Station, Tx. 77843.
Single copy free.

"Entomology...an Exciting Scientific Career." Entomological Society of America. 4603 Calvert Rd., College Park, Md. 20740.
Single copy free.

"Requirements for Apprentice Jockeys." The Jockey Club. 300 Park Ave., New York, N. Y. 10022.

Local Resources

Plant Production Occupations

Books, Pamphlets and Periodicals

California & Hawaiian Sugar Co., Public Relations Department. One California St., San Francisco, Ca. 94016.

Cotton & Cordage Research Branch. Plant Science Research Division ARS, USDA Plant Industry Station, Beltsville, Md. 20705.

"Keep an Eye on the Sunflower." Kinnear, Herb. The American Farmer. (February 1973). 225 Touhy Ave., Park Ridge, Il. 60068.

Northrup, King & Co., Mrs. Mary Fritz. 1500 Jackson St., N. E., Minneapolis, Mn. 55413.

Producing Farm Crops. Wilson, Harold K. and Richer, A. Chester. Interstate Printers and Publishers, Inc.

The Production of Field Crops. Kipps, Michael S. McGraw-Hill Book Co. 1970.

Rice Council. P. O. Box 2280. Houston, Tx. 77000

Sunkist Growers, Inc. P. O. Box 7888, Valley Annex, Van Nuys, Ca. 91409.

U. S. Beet Sugar Association. Educational Materials. Box 500, Dansville, N. Y. 14437.

Audiovisuals

Free and Inexpensive

Local Resources

Supplies Occupations

Books, Pamphlets and Periodicals

American Feed Manufacturers Association. 53 W. Jackson Blvd., Chicago, Il. 60604.

Feeding Dairy Cattle. Farmer Bulletin #2153. U. S. Dept. of Agriculture. Washington, D. C. 20250.

Handling and Using Agricultural Chemicals Safely. Vocational Agriculture Service. University of Illinois. Urbana, Il. 61801.

Hungry Soil. John Deere. Moline, Il. 61265.

National Agricultural Chemicals Association. The Madison Bldg., 1155 15th St., NW, Washington, D. C. 20005.

"Pesticides Can Be Used Safely." Flora, Newton W. *OSU Extension Facts*. Oklahoma State University. Stillwater, Ok. 74074.

Salesmanship in Agriculture Business. Booklet. Vocational Agriculture Service. College of Agriculture. University of Illinois. Urbana, Il. 61801.

The Use of the Cash Register. Vocational Agriculture Service. College of Agriculture. University of Illinois. Urbana, Il. 61801.

Weed Control, Cultural and Chemical. Dept. of Agriculture Education. Ohio State University. Columbus, Oh. 43200.

Audiovisuals

Occupations in Agricultural Supply and Service and Salesmanship in Agriculture Business. Vocational Agriculture Service. College of Agriculture. Urbana, Il. 61801.
Slide--filmstrip.

Free and Inexpensive

American Chemical Society. 1155 15th St., NW, Washington, D. C. 20036.

Your Farm Background and Agribusiness Selling. Sales and Marketing Executives International. 630 3rd Ave., New York, N. Y. 10017.

Local Resources

Services Occupations

Books, Pamphlets and Periodicals

American Society of Agronomy. 677 S. Segoe Rd., Madison Wi. 53711.

American Veterinary Medical Association. Public Information Dept. 600 S. Michigan Ave., Chicago, Il. 60605.

"Careers in Cooperatives." Cooperative League U. S. A. 1828 L St., NW, Suite 1100, Washington, D. C. 20036.

A Challenge for You in Agronomy. Department of Agronomy. College of Agriculture. University of Illinois. Urbana, Il. 61801.

Dean of Agriculture of your state land-grant college or university. (For example, Dean of Agriculture. University of Illinois. 104 Mumford Hall, Urbana, Il. 61801.)
Write for information on careers in agriculture.

"Look What Those VETERINARIANS Are up to Now!" Career World. Vol. 5, No. 3. (November 1976): 22-23.

National 4-H Club Foundation of America. 7110 Connecticut Ave., Washington, D. C. 20015.
Send for information about 4-H Club programs.

Opportunities in Veterinary Medicine. Swope, Robert, V. M. D. Vocational Guidance Manuals. 1973.

"Swine Nutrition." Stevens, Vernon; Luce, William G. and Gill, Don R. OSU Extension Facts. Oklahoma University, Stillwater, Ok. 74074.

"Veterinarians." Career World. Vol. 3, No. 9. (May 1975): 16-17.

Veterinary Medicine. Swope, Robert, V. M. D. Vocational Guidance Manuals. 1973. $4.90.

Women's Veterinary Medical Association. Dr. Bonnie V. Beaver. College of Veterinary Medicine. Texas A & M University. College Station, Tx. 77843.
Write with specific questions on veterinary careers for women.

Your Future in Veterinary Medicine. Riser, Wayne H., D. V. M. Arco Publishing Company. 1976.

Audiovisuals

"Country Vet." Encyclopedia Britannica.
A 12 min. film depicting the work of a black veterinarian in South Dakota, 1972. Rental, $9.00 for 3 days.

" The Covenant." Modern Talking Picture Service. 1972.
Runs 20 min. Free on loan.

People Who Influence Others. Guidance Associates.
Includes a county agent who invites students to a dairy farm where he helps farmers improve their farming methods.

Free and Inexpensive

Agricultural Research Service. U. S. Dept. of Agriculture. Personnel Division. Federal Center Bldg., Hyattsville, Md. 20782.
Single copies free. Career pamphlets on plant scientist, entomologist, animal scientist, ag engineer and agronomist.

"Agriculture Mechanics," "Soil and Water Management," "Dairy Production," "Crop Production," and "Sales--Service." Future Farmers of America. National FFA Center. P. O. Box 15160, Alexandria, Va. 22309.
Single copies of the above titles free. Send 50¢ for "Agri Opportunities."

"Animal Technology," and "Today's Veterinarian." American Veterinary Medical Association. 930 N. Meacham Rd., Schaumburg, Il. 60172.
Single copies free. Enclose a stamped, self-addressed, legal size envelope with your request.

"A Career in Veterinary Medicine," #HRA-74-313. "How to Pay for Your Health Career Education--a Guide for Minority Students," #HRA-74-8. U. S. Dept. of Health, Education and Welfare (HEW), Bureau of Health Resources Development. Bethesda, Md. 20014.
Single copies free.

"Career in World Agricultural Development." Foreign Economic Development Service. U. S. Dept. of Agriculture. Washington, D. C. 20250.
Single copy free.

4-H Youth Extension Service. U. S. Dept. of Agriculture. Washington, D. C. 20250.
Write for free career information.

International Agriculture: A World of Opportunities. Agricultural Experiment Station. University of Missouri. Columbia, Mo. 65201.
Send 75¢ for updated comprehensive booklet which lists job opportunities with specific employers.

National Grange. 1616 H St., NW, Washington, D. C. 20006.

Opportunities in Teaching Vocational Agriculture. National Vocational Agricultural Teachers Association. Box 4498, Lincoln, Ne. 68504.

There's a New Challenge in Agriculture. American Farm Bureau Federation. 225 Touhy Ave., Park Ridge, Il. 60068.
Single copies free.

Local Resources

Mechanics Occupations

Books, Pamphlets and Periodicals

Farm Machinery Economic Decisions. Worksheets from Cooperative Extension Service. College of Agriculture. University of Illinois. Urbana, Il. 61801.

International Harvester Co. 401 N. Michigan Ave., Chicago, Il. 60611.

Lumber Rigid Frames for Farm Buildings. University of Illinois. College of Agriculture. Extension Service. Urbana, Il. 61801.

Tractor 1, 2, 3, 4. Petroleum Power Program. 4-H Four-Year Program on Tractor Care. University of Illinois. College of Agriculture. Cooperative Extension Service. Urbana, Il. 61801.

Audiovisuals

Think Big. Vocational Agriculture Service. University of Illinois. Urbana, Il. 61801. Filmstrip.

Free and Inexpensive

"A Career in Agri-mechanization," "Men, Machines and Land." Farm and Industrial Equipment Institute. 410 N. Michigan Ave., Chicago, Il. 60611.
First title, single copy free; second title $1.00.

"Careers in Farm and Power Equipment Retailing." National Farm and Power Equipment Dealers Association. 2340 Hampton Ave., St. Louis, Mo. 63139.
Single copy free.

Local Resources

Products (Processing) Occupations

Books, Pamphlets and Periodicals

The Almanac of the Canning, Freezing, Preserving Industries. Edward E. Judge & Sons. 1970.

Amalgamated Meat Cutters & Butchers. Workmen of North America. 2800 Sheridan Rd., Chicago, Il. 60600

American Dairy Association. 20 N. Wacker Dr., Chicago, Il. 60600

Canner/Packer (monthly). One Gateway Center, Kansas City, Ks. 66101.

Chocolate, Cocoa and Confectionery: Science and Technology. Minifie, Bernard W. AVI Publishing Co. 1970.

Every Day Facts--Food Additives. Manufacturing Chemists Association, Inc. 1825 Connecticut Ave., NW, Washington, D. C. 20009. 1970.

Food Packaging. Sacharow, Stanley and Griffin, Roger C. AVI Publishing Co. 1970.

Food Processing (monthly). 111 E. Delaware Pl., Chicago, Il. 60611.

Fresh, Canned and Frozen Food from Past to Future. Wise, William. Parents Magazine Press.

The Label Tells the Story. Grocery Manufacturers of America, Inc. 1632 K St., NW, Washington, D. C. 20006.

National Canners Association. 1133 20th St., NW, Washington, D. C. 20036.

Pacific Fruit News (weekly). P. O. Box 6266, San Jose, Ca. 95150.

The Story of Corn. Limburg, Peters. Julian Messner. 1971.

The Technology of Food Preservation. Desrosier, Norman W., Ph. D. AVI Publishing Co. 1970.

United Packinghouse Workers of America. 608 S. Dearborn St., Chicago, Il.

Audiovisuals

Free and Inexpensive

Local Resources

Ornamental Horticulture Occupations

Books, Pamphlets and Periodicals

Careers in Landscape Architecture. Bureau of Appointments and Occupational Information. University of Michigan. Ann Arbor, Mi. 48104.

Flower Arranging--A Fascinating Hobby. Burroughs, Laura Lee. Dept. F. Coca Cola Bottling Co. Atlanta, Ga. 30300.

Future in the Nursery Industry. Richards Rosen Press, Inc.

Golf Course Superintendents of America. 1617 St. Andrews Dr., Lawrence, Ks. 66044.

Greenhouse Crop Production, *Landscape Design*, *Landscape Maintenance and Establishment*, *Retail Flower Shop Operation and Management*, *Turfgrass Maintenance and Establishment*. Dept. of Agricultural Education. The Pennsylvania State University. University Park, Pa. 16802.

Greenhouse Flowers and Bedding Plants. Interstate Printers and Publishers, Inc. 1975.

"Landscape Architect." *Career World*. Vol. 2, No. 8. (Mid-April 1974): 18-19.

"Landscape Architecture as a Professional Career." American Institute of Landscape Architects. 6810 N. 2nd Pl., Phoenix, Az. 85102.

Landscaping the Home and School Grounds. State Dept. of Education. Agricultural Education Dept. and Vocational Education Media Center. Clemson University. Clemson, S. C. 29631.

Nursery Crops and Landscape Designs. Interstate Printers and Publishers, Inc. 1975.

Opportunities in Landscape Architecture. Griswold, Ralph. Vocational Guidance Manuals. 1970.

"Ornamental Horticulture." *Career World*. Vol. 4, No. 4. (December 1975): 20-21.

"We Want You--Ornamental Horticulture." Vocational Agriculture Service. University of Illinois. Urbana, Il. 61801.

Audiovisuals

Careers in Ornamental Horticulture. Vocational Education Productions. California State Polytechnic College. San Luis Obispo, Ca. 93401.
Filmstrip.

Choosing a Career in Ornamental Horticulture. Vocational Agriculture Service. University of Illinois. Urbana, Il. 61801.
Filmstrip.

Free and Inexpensive

The American Horticulture Society. Mount Vernon, Va. 22121.
Career information and list of schools, single copy free.

"Careers in the Floral Industry." Society of American Florists. 901 N. Washington St., Alexandria, Va. 22314.
Single copy free.

"Landscape Architecture--A Career." American Society of Landscape Architects. 1750 Old Meadow Rd., McLean, Va. 22101.

"Something Worth Doing." American Society of Nurserymen. 230 Southern Bldg., 15th and H Sts., NW, Washington, D. C. 20005.
Free with long, self-addressed stamped envelope.

Local Resources

Renewable Natural Resources Occupations

Books, Pamphlets and Periodicals

Agricultural Research Service. U. S. Dept. of Agriculture. Washington, D. C. 20250.

American Fisheries Society. 1404 New York Ave., NW, Washington, D. C. 20005.

American Forestry Association. 919 17th St., NW, Washington, D. C. 20006.

American Society of Range Management. Box 5041, Portland, Ore. 97213.

American Waterworks Association. 2 Park Ave., New York, N. Y. 1000

Bureau of Land Management. U. S. Department of the Interior. Washington, D. C. 20242.

Bureau of Sport Fisheries and Wildlife. U. S. Dept. of the Interior Fish and Wildlife Service. 18th and C Sts., NW, Washington, D. C. 20240.

Business of Diving. Kenny, John E. Gulf Publishing Co. 1972. $14.95.

Careers for the '70's Conservation. Dodd, Ed. Crowell-Collier Press. 1971.

Conservation Law Society of America. 1500 Mills Tower, San Francisco, Ca. 94104.

"Divers: Careers Under Water." Career World. Vol. 3, No. 6. (February 1975): 20-21.

Fish Boat (including Seafood Merchandising) (monthly). 624 Gravier St., New Orleans, La. 70130.

Forest Service. U. S. Dept. of Agriculture. Washington, D. C. 20251.

Jobs in Marine Science. Ross, Frank, Jr. Wm. Morrow and Co.

Maple-Syrup Farm. Rockville, In. 47872

The National Audubon Society. 1130 Fifth Ave., New York, N. Y. 1000

National Park Service. U. S. Dept. of Interior. Washington, D. C. 20240.

National Oceanic and Atmospheric Administration. Office of Public Affairs. Rockville, Md. 20852.

Send for NOAA, a quarterly magazine about the policies and programs of NOAA. Single copies $1.50; annual subscription $5.50.

Oceanography Lab. Berger, Melvin. John Day Co. 1973.

"The Oceans and You." Marine Technology Society. 1730 M St., NW, Suite 412, Washington, D. C. 20036.
A kit containing a list of colleges and universities offering oceanography programs. Single kits and postage about $3.00. Ten to 100 kits about $2.50 each.

Park Ranger. Colby, C. G. Coward, McCann and Geoghegan. 1971.

Regional Bureaus of Sport Fisheries and Wildlife.

The Sea Farmers. Waters, John. Hastings House. 1970.

Skin Diver Magazine. Petersen Publishing Co. $1.00 per copy.

Society of American Foresters. 1010 16th St., NW, Washington, D. C. 20036.

Soil Conservation Service. The U. S. Dept. of Agriculture. Washington, D. C. 20251.

Sport Fishing Institute. 719 13th St., NW, Washington, D. C. 10005.

State Depts. of Conservation. Division of Parks and Memorials. State Capitols.

State Game, Fish, and Conservation Depts.
For information on jobs related to fish, game, and crop production and conservation.

What Does an Oceanographer Do? Waters, John F. Dodd, Mead and Co. 1970.

Wildlife Management Institute. 709 Wire Bldg., Washington, D. C. 20005.

The Wildlife Society. Suite S176, 3900 Wisconsin Ave., NW, Washington, D. C. 20016.

Audiovisuals

America: People, Products and Resources. Valiant, Inc. 1972.
Five filmstrips dealing with fishing, machines, steel, oil, and Americans at work.

Career Education Series B: Agricultural Jobs, Forestry & Fishing, and Others. (Special Education). Interpretive Education. 1973.
Five color filmstrips, five audio cassette tapes, 1 teacher's manual.

Careers in Conservation. Sound filmstrip. Pathescope Educational Films, Inc.

Focus on America--The Northeast Region. "The Chesapeake Bay Area: A Case Study." Society for Visual Education.
Explores economic competition for natural resources.

Food From the Sea. Bailey Film Associates.

How Man Obtains Water. Film loop. Doubleday Multimedia. 1973.

"Is a Career in Fishing or Forestry for You?" Counselor Films, Inc. 1975. Runs 16 min. Write for preview information.

People Who Work in Science. Films, cassettes. Guidance Associates. 1972.

Free and Inexpensive

"Agribusiness and Natural Resources." Grayson County College. P. O. Drawer 979, Sherman/Denison, Tx. 75020. Send $1.00.

"Careers in the Soil Conservation Service for Students Majoring in Agronomy, Soil Science, Ag Economics, Forestry, Range Conservation, Wildlife Biology, Civil Engineering, Geology, Resource Conservation, and Ag Engineering," "Students Start Your Career in Soil Conservation Service Before You Graduate," and "Careers in Soil Conservation Service." Soil Conservation Service. U. S. Dept. of Agriculture. Washington, D. C. 20250.
Single copies free.

"Fisheries as a Profession: A Career Guide for the Field of Fisheries Science." American Fisheries Society. 5410 Grosvenor Lane, Bethesda, Md. 20014.
Single copy free.

"NAUI Diving Association Brochure," "NDA News." NAUI Diving Association 22809 Barton Rd., Grand Terrace (Colton) Ca. 92324.
Single copies free.

"Underwater Instructor Training-Information Booklet." Professional Association of Diving Instructors. P. O. Box 177, Costa Mesa, Ca. 92627.
Single copy free.

University Council on Water Resources. 212 Agricultural Engineering Bldg. University of Nebraska. Lincoln, Ne. 68503.

"University Curriculi--1975." National Sea Grant Program. Dr. Robert B. Abel, Director. National Oceanic and Atmospheric Administration. 3300 Whitehaven St., NW, Washington, D. C. 20235.

"Your Future in Deep Sea Diving," and "General Catalog--1974." Commercial Diving Center. 272 S. Fries Ave., Wilmington, Ca. 90744.
Single copies free.

Local Resources

Forestry Occupations

Books, Pamphlets and Periodicals

The American Christmas Tree Council. 342 Madison Ave., New York, N. Y. 10017.

American Forest Institute. Education Division. 1619 Massachusetts Ave., NW, Washington, D. C. 20036.

The American Forestry Association. 1319 18th St., NW, Washington, D. C. 20036.

American Plywood Association. 1119 A St., Tacoma, Wa. 98401.

Bibliography of Reading Materials on Forestry and Forestry Careers. Society of American Foresters. 1010 16th St., NW, Washington, D. C. 20036.

Careers for Foresters and Wood Scientists. Dept. of Forestry. University of Illinois. Urbana, Il. 61801.

Careers Outdoors. Joseph, James. Thomas Nelson, Inc. 1973.

Challenge in Wood Research. U. S. Dept. of Agriculture. Washington, D. C. 20251.

Defenders of Wildlife. 2000 N. St., NW, Washington, D. C. 20036.

Dept. of Conservation. Division of Forestry of Your State.

Forestry Activities: A Guide for Youth Group Leaders. Forest Service. U. S. Dept. of Agriculture. 1621 N. Kent St., Arlington, Va. 20415.

Hammermill Paper Co. Educational Services. Erie, Pa. 16512.

"It's No Easy Life in the Forest Service." *Career World*. Vol. 4, No. 6. (February 1976): 28-29.

The Lessons in Forestry. Myers, J. Walter, Jr. Louisiana Forestry Commission. Baton Rouge, La. 1972.

The National Wildlife Federation. 1412 16th St., NW, Washington, D. C. 20036.

Opportunities Unlimited for Careers of Prestige and Profit in the Forest Products Industry. National Forest Products Association. 1619 Massachusetts Ave., NW, Washington, D. C. 20036.

Saint Regis Paper Co. 150 E. 42nd St., New York, N. Y. 10017.

Southern Forest Institute. One Corporate Square, NE., Suite 280, Atlanta, Ga. 30300.

Southern Forests Products Association. P. O. Box 52468, New Orleans, La. 70150.

Standard Milling Co. P. O. Box 8327, Kansas City, Mo. 64105.

State Departments of Forests and Waters (located in each state).

The Story of the Redwood Lumber Industry. California Redwood Association. 617 Montgomery St., San Francisco, Ca. 94111.

U. S. Dept. of Agriculture. Office of Information. Publications Division. Washington, D. C. 20250.

Western Wood Products Association. Yeon Bldg., Portland, Ore. 97204.

Wildlife Management Institute. Wire Bldg., Washington, D. C. 20005.

Your Future in Forestry. Hanaburgh, David. Richards Rosen Press, Inc. 1971.

Audiovisuals

Field Trips Out of the Ordinary: To a Lumber Mill. Sound filmstrips. Eye Gate. 1973.

Focus on America--The Pacific States. "Timber: Washington's Most Valuable Crop." Society for Visual Education.

Forestry Aids. 8mm Silent film loop. Encyclopedia Britannica.

Logging. Film loop. Doubleday and Co. 1973.

Free and Inexpensive

"Career Profiles in Forestry, Conservation, Ecology, Environmental Management," and "Women in the Forestry Service." Forest Service. U. S. Dept. of Agriculture. Washington, D. C. 20251.

Single copy free; ask for the address of the Forest Service office nearest you.

Opportunities in Logging. Pacific Logging Congress. American Bank Bldg., 621 SW Morrison St., Portland, Ore. 97205.

Free film.

"So You Want to be a Forester?" The American Forestry Association. 1319 18th St., NW, Washington, D. C. 20036.

Each copy 25¢.

Local Resources

OCCUPATIONAL CLUSTER: **3**

BUSINESS, MARKETING AND MANAGEMENT

General

Books, Pamphlets and Periodicals

Accrediting Commission for Business Schools. 1730 M St., NW, Washington, D. C. 20036.

Exploring Business and Office Occupations. Peterson, Marla P. Gregg Division. McGraw-Hill Book Co. 1976.

Exploring Retailing and Wholesaling Careers. Grades 9-12. Workbook. South-Western Publishing Co.

Opportunities in Office Occupations. Popham, Estelle and Ettinger, Blanche. Grades 9-12. Vocational Guidance Manual. 1972.

"White Collar Whirl." Career World. Vol. 1, No. 4. (Mid-December 1972): 11-15.

Audiovisuals

Careers in Business Occupations. Cassette tape programs. Educational Research, Inc.

Careers in Office Services. Grades 9-12. Butterick Publishing Co.
Includes information on summer and part-time employment as opportunities for students to see what office work is like and whether it satisfies their personal needs.

Job Opportunities in a Department Store. Sound filmstrip. Society for Visual Education.

Job Opportunities in a Supermarket. Sound filmstrip. Society for Visual Education.

Free and Inexpensive

Careers in Business. National Business Education Association. Dulles International Airport. P. O. Box 17402, Washington, D. C. 20041.
Send $1.00 for booklet.

Local Resources

Clerical-Bookkeeping/Accounting-Secretarial Occupations

Books, Pamphlets and Periodicals

"Are Secretaries Here to Stay?" *Career World*. Vol. 3, No. 8. (April 1975): 18-19.

Career Opportunities: Marketing, Business and Office Specialists. J. G. Ferguson. 1970.
Over 300 job descriptions and a list of schools offering programs in these specialties.

"Clerk-Typist." *Career World*. Vol. 4, No. 1. (September 1975): 19.

Exploring Clerical Careers. Workbook. Grades 9-12. South-Western Publishing Co.

Exploring Secretarial Careers. Workbook. Grades 9-12. South-Western Publishing Co.

Jobs in Business and Office. Haskins, James. Grades 6-12. Wm. Morrow and Co.
Includes information on establishing a business.

"Q & A--Secretary." *Career World*. Vol. 5, No. 1. (September 1976): 30-31.

"Shorthand Reporters." *Career World*. Vol. 3, No. 9. (May 1975): 18-19.

Timed Writing Careers. Grades 9-12. South-Western Publishing Co.

Your Future as a Shorthand Reporter. Van Allen, Edward. Richards Rosen Press, Inc. 1974. $5.10 postpaid.

"White Collar Land: Home of Over Thirteen Million Office Workers." *Career World*. Vol. 2, No. 5. (Mid-January 1974): 9-15.

Word Processing in the Modern Office. Cecil, Paula B. Cummings Publishing Co., Inc. 1976.

The Word Processing Explosion. Konkel, Gilbert J. and Peck, Phyllis J. Office Publications, Inc. 1976.

Your Future as a Secretary. Noyes, Neil Braley. Grade 7-up. Richards Rosen Press, Inc. 1970.

Audiovisuals

Careers in Business Office Skills. Sound filmstrips. Grades 9-12. Pathescope Educational Films, Inc. 1974.
Business may mean law, medicine, education, radio or T. V.

Office Worker Series. Interpretive Education. 1973.
Five filmstrips and five audio cassette tapes and manual.

"Secretarial Careers." J. Weston Walch, Publisher.
Posters with commentaries. Other titles are:

- Careers for Good Speakers
- Careers for Good Writers
- Careers in Art
- Careers in Athletics
- Careers in Home Economics
- Careers in Music
- Ecology Careers
- Women in Business
- Getting a Job
- How to Get Along with Others
- How to Keep Your Job
- How to Live with Yourself
- Stenographic Careers
- Women in Athletics

Working in the Office. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Free and Inexpensive

Court Reporting--Occupational Guide. Consumer Affairs. Certified Shorthand Reporters Board. 1020 North St., Sacramento, Ca. 95814.
Single copy free.

"The Office and You...Careers," and "What is an Executive Secretary?" Administration Management Society, Publications Department. Willow Grove, Pa. 19090.
The first title is $1.00, the second is free.

"Secretarial Career: 20 Questions and Answers," "Secretarial Careers for Young Men and Women," "The Purposes of the Certified Professional Secretary Program." National Secretaries Association. Suite G10, Crown Center, 2440 Pershing Rd., Kansas City, Mo. 64108.

"Shorthand Reporting as a Career." National Shorthand Reporters' Association 2361 S. Jefferson Davis Highway, Arlington, Va. 22202.
Also list of NSRA approved training programs. Single copies free. Include self-addressed, stamped, #10 envelope.

"So You Want to be a Legal Secretary." National Association of Legal Secretaries. 3005 E. Skelly Dr., Suite 120, Tulsa, Ok. 74105.
Also "NALS--The Professional Association for Your Legal Secretary" which gives information on certifying exams, requirements and duties of a legal secretary. First title 5¢, second title single copy free.

"Your Career as a Secretary," "Your Career as a Legal Secretary," "Your Career as a Medical Secretary," "Don't Overlook the Business College," "What it Takes to be a Secretary," "Excitement, Travel, Career as an Overseas Secretary," "Directory of Accredited Institutions." Association of Independent Colleges and Schools, 1730 M St., NW, Washington, D. C. 20036.
Single copies free.

"Your Future as a Stenographer." Ford Motor Co., Educational Affairs Department. American Road, Dearborn, Mi. 48121.

Local Resources

Electronic Data Processing Occupations

Books, Pamphlets and Periodicals

American Society for Information Science. 2000 P St., NW, Washington, D. C. 20036.

Association for Educational Data Systems. 1201 16th St., NW, Washington, D. C. 20036.

Boeringer, Ellis. Director of Personnel. McDonnell Douglas Automation Co. Box 516, St. Louis, Mo. 63166.

Burroughs Corp. Dept. 5A30, Burroughs Pl., Detroit, Mi. 48232.

Career Opportunities in the Federal Government for Computer Specialists, #420. U. S. Civil Service Commission. Bureau of Recruiting and Examining. 1900 E. St., NW, Washington, D. C. 20415.

Control Data Corp. Public Relations Dept. Box 0, Minneapolis, Mn. 55440.

Digital Equipment Corp. 146 Main St., Maynard, Ma. 01754.

Exploring Data Processing Careers. Grades 9-12. Workbook. South-Western Publishing Co.

Honeywell Information Systems. Inquiry Center. 200 Smith St., Waltham, Ma. 02154.

IEEE, Computer Group. 345 E. 47th St., New York, N. Y. 10017.

"Input Data on Computer Careers." *Career World*. Vol. 2, No. 5. (Mid-January 1974): 4-8.

International Business Machines Corp. Armonk, N. Y. 10504.

"The Latest Data on COMPUTER CAREERS." *Career World*. Vol. 4, No. 5. (January 1976): 5-15.

NCR Corp. Professional Recruitment. Main and K Sts., Dayton, Oh. 45479.

Occupations in Electronic Computing Systems. U. S. Dept. of Labor. 200 Constitution Ave., NW, Washington, D. C. 20210. 1972.

Includes a glossary of technical terms, a bibliography, and a listing of organizations, colleges, and universities where additional information about electronic computing systems may be obtained.

Opportunities in Electronic Data Processing. Nussbaum, Martin. Grades 9-12. Vocational Guidance Manual. 1972.

Society for Information Display. 654 N. Sepulveda Blvd., Los Angeles, Ca. 90049.

Special Libraries Association. 235 Park Ave., S., New York, N. Y. 10003.

Sperry-Univac Division, Sperry Rand Co. Personnel Dept. Box 500 Blue Bell, Pa. 19422.

Systems and Procedures Association. 7890 Brookside Dr., Cleveland, Oh. 44138.

Compjob. Westlund, John Henry. Employment Information Services. Box 3265, Chico, Ca. 95926. 1975 $5.95. Second edition.

Your Future in the Electronic Computer Field. Bibby, Dause L. Richards Rosen Press, Inc. 1970. $2.45.

Audiovisuals

Careers in Computers. Sound filmstrip. Pathescope Educational Films, Inc.

Computers in Occupations. Grades 7-12. Posters. J. Weston Walch, Publisher.

Includes fields of medicine, banking, computer-assisted instruction, classroom desk calculators, scheduling, plastics, nursing, construction, architecture, social science, space, science, library, census-taking, business, agriculture, meteorology, automotive assembly.

Putting Computers to Work. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Free and Inexpensive

Computer Careers. Business Equipment Manufacturers Association. 1828 L St., NW, Washington, D. C. 20036.

"A Computer Glossary," "The Information Machine," "Some Call It Software." Color films. Modern Talking Picture Service. 2323 New Hyde Park Rd., New Hyde Park, N. Y. 10040.

Films run ten to eleven minutes; on free loan.

Data Processing Career Opportunities. Catalyst. $1.25.

"Facts on Computer Careers." American Federation of Information, Processing Societies, Inc. 210 Summit Ave., Montvale, N. J. 07645. 1973.

Single copy free.

"Your Career in Data Processing," "ABCs of ADP," and "Student EDP Career Guide." Data Processing Management Association. 505 Busse Highway, Park Ridge, Il. 60068.

Local Resources

Promotion and Marketing Research Occupations

Books, Pamphlets and Periodicals

Introduction to Business. Deep and Brinckloe. Prentice-Hall, Inc. 1974. $10.95.

"Marketing and Distribution." Career World. Vol. 2, No. 8. (Mid-April 1974): 4-13.

"A Public Relations Director's Frantic, Frenzied Lifestyle." Career World. Vol. 3, No. 6. (February 1975): 27.

Public Relations News Service Department. 127 E. 80th St., New York, N. Y. 10021.
Questions answered and material provided concerning careers in public relations.

"Public Relations Specialist." Career World. Vol. 3, No. 7. (March 1975): 24-25.

Audiovisuals

People Who Influence Others. Sound Filmstrip. Grades 5-8. Guidance Associates.

Free and Inexpensive

"American Colleges Offering Degrees and Courses in Public Relations," "Careers in Public Relations," "Public Relations: Profession in a Growth Industry," "Women in Public Relations." Public Relations Society of America. 845 Third Ave., New York, N. Y. 10017.
Single copies free.

"Dear Richard." Leo Burnett Co. Prudential Plaza. Chicago, Il. 60601.
Free brochure about careers in advertising.

"A Guide to Careers in Advertising." American Association of Advertising Agencies. 200 Park Ave., New York, N. Y. 10017.
Booklet 50¢.

"Industrial Advertising Careers." Association of Industrial Advertisers, Education Committee. 41 E. 42nd St., New York, N. Y. 10017.
Single copy free.

"Jobs in Advertising," "Questions and Answers about Advertising," "Should You Go Into Advertising?" "The Commercial Artist." American Advertising Federation. 1225 Connecticut Ave., NW, Washington, D. C. 20036.
Single copies free.

"Opinion of the Publics." Color, sound film. Modern Talking Picture Service, Inc. 2323 New Hyde Park Rd., New Hyde Park, N. Y. 11040.
A 33 min., 16-mm film; free on loan.

"What Advertising Agencies Are, What They Do, and How They Do It." American Association of Advertising Agencies. 200 Park Ave., New York, N. Y. 10017.

"Where Shall I Go to College to Study Advertising?" Advertising Education Publications. 3429 Fifty-Fifth St., Lubbock, Tx. 79413. Send 35¢.

Local Resources

Purchasing and Sales Occupations

Books, Pamphlets and Periodicals

"The Artful Drummer: Careers in Selling." Career World. Vol. 3, No. 9. (May 1975): 4-15.

The Battle for Sales. Houlehen, Robert and Hall, Elvajean. Grades 9-12. J. B. Lippincott Co. 1973.

Bob, the Super Clerk. John, Hughes. Grades 7-12. Janus Book Publishers.

Careers and Opportunities in Retailing. Wilinsky, Harriet. National Retail Merchants Association, Book Order Department. 100 W. 31st St., New York, N. Y. 10001. 1970. $6.75 plus 35¢ postage and handling.

Careers in Marketing. Bikkie, J. A., McGraw-Hill Book Co. 1971. $2.85.

The Complete Book of Fashion Modeling. Lenz, B. Crown Publishers. $8.25.

Exploring Marketing Occupations. Smith, Gary R., Vorndran, Barbara Sethney, and Winn, Charles S. Gregg Division, McGraw-Hill Book Co. 1976.

How to Become a Successful Model. Krem, Viju. Arco Publishing Co. 1975. $8.95 in cloth, $5.00 in paperback.

Jobs in Marketing and Distribution. Hall, Elvajean. Grades 6-12. Wm. Morrow and Co.

Mannequin, My Life as a Model. Kenmore, Carolyn. Delacorte Press. $5.95.

"Marketing and Distribution." Career World. Vol. 2, No. 8. (Mid-April 1974): 4-13.

"Model." Career World. Vol. 4, No. 7. (March 1976): 22-23.

National Association of Real Estate Boards, Education Department. 155 E. Superior St., Chicago, Il. 60611.
Also, call your local real estate board and see what career booklets may be available.

National Automobile Dealers Association. 2000 K St., NW., Washington, D. C. 20006.

On the Job Training and Where to Get It. Liston, R., Julian Messner Publisher. 1973. $5.54 postpaid.

Your Future as a Model. MacGil, G. Grades 9-12. Richards Rosen Press, Inc. 1971. $5.10.

Your Future in Retailing. Scott, George A. Richards Rosen Press, Inc. $3.99.

Your Future in Salesmanship and Sales Management. Elzerman, A. W. Richards Rosen Press, Inc. 1973.

Audiovisuals

Career Opportunities in Retailing. Color film. Aims Instructional Media Services, Inc.
An 18-min., 16 mm. film.

Careers in Sales. Silent film loop. Pathescope Educational Films, Inc.

Careers in Sales and Service Occupations. Cassette tape. Grades 5-12. Educational Research, Inc.

Careers in Sales/Joys of Selling. American Personnel & Guidance Association Films.
Film runs 30 min.; $20.00 a day rental.

Career Mothers. Sound Filmstrip. Valiant, Inc. 1972.
Six filmstrips and recordings include "Advertising Agency Executive," "Retail Clerk," and "Commercial Artist."

Gasoline Service Station Attendants. 8mm Silent film loop. Encyclopedia Britannica.

"Is a Sales Career for You?" Counselor Films , Inc.
Film runs for 15 min. Write for preview information.

"Opportunities in Sales and Merchandising." National Archives & Record Service, National Audiovisual Center.
Film runs 11 min.; $7.50 for three days rental.

Salesmen and Saleswomen in Retail Stores. 8mm Silent film loop. Encyclopedia Britannica.

Selling. Sound Filmstrip. Grades 4-8. Pathescope Educational Films, Inc.

Free and Inexpensive

"Careers in Hardware Retailing." National Retail Hardware Association. 964 N. Pennsylvania St., Indianapolis, Ind. 46204.

"Careers in Marketing," and "Women in Sales: Ms Is a Hit." Sales Management: The Marketing Magazine Reader Service. 630 3rd Ave., New York, N. Y. 10017.
$1.00 for each title.

"Careers in Real Estate." National Association of Realtors. 155 E. Superior, Chicago, Il. 60611.
Single copy free.

"Careers in Retailing." Ohio State Council of Retail Merchants. 71 E. State St., Columbus, Oh. 43215.
Single copy free.

"Facts on Careers in the Retail Automotive Business." General Motors Corp., Public Relations, Rm 1-101, General Motors Building, Detroit, Mi. 48202.
Single copy free.

"The Golden Touch." Retail Jewelers of America, Inc. 10 Rooney Circle, West Orange, N. J. 07052.
Single copy free.

"Looking for a Career." National Association of Food Chains. 1725 Eye St., NW, Washington, D. C. 20006.

"The Manufacturers' Agent." Manufacturers' Agents National Association. 3130 Wilshire Blvd., Los Angeles, Ca. 90010.
Single copy free.

Modeling Association of America. 919 Third Ave., New York, N. Y. 10022.
Write for free information.

"Opportunities in Retailing." National Retail Merchants Association. 100 W. 31st St., New York, N. Y. 10001.
Single copy free.

"Retailing--A Way of Life." Modern Talking Picture Service. 20 min.
Free on loan.

"The Salesman--Ambassador of Progress." "Opportunities in Selling." Sales and Marketing Executives International. 380 Lexington Ave., New York, N. Y. 10017.
Single copy free.

"You'll Earn It." Modern Talking Picture Service. 24 min.
Free on loan.

"Your Career in the Retail Car and Truck Business." National Automobile Dealers Association. 2000 K St., NW., Washington, D. C. 20006.

Local Resources

Distribution Occupations

Books, Pamphlets and Periodicals

Distribution Worldwide. Chilton Way, Radnor, Pa. 19089.
Check your local library for this trade publication.

"Warehouse Jobs." Career World. Vol. 3 No. 6. (February 1975): 22-23.

Audiovisuals

Career Education Series A. Interpretive Education. 1973. Five color filmstrips, five audio cassette tapes, one teacher's manual. Includes "Introduction to Careers," "Service Jobs," "Jobs in Industry," "Jobs in Distribution," "Career Awareness." (Special Education).

Routemen. 8mm Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

Armbruster, Tod. Director of Communication. National Furniture Warehouseman's Association. 222 W. Adams St., Room 1425, Chicago, Il. 60606.
Will answer specific questions about jobs in commercial warehouses.

"Your Career in Wholesale Distribution." National Association of Wholesaler--Distributors. 1725 K St., NW., Washington, D. C. 20006.
Single copy free.

Local Resources

Top Management Occupations

Books, Pamphlets and Periodicals

American Management Association. 135 W. 50th St., New York, N. Y. 10020.

"Big Wheel at Chrysler." Career World. Vol. 3, No. 2. (October 1974): 26.

Careers in Hotel Management. McDonnell, Virginia. Grades 9-12. Julian Messner. 1971.

"Handicrafts and Home Business." Small Business Bibliography #1. U. S. Small Business Administration. 1441 L St., NW., Washington, D. C. 20416. 1973. Check with a local Small Business Administration field office in many cities.

The Joy of Work. Keefe, John and Stein, Stanley J. Richards Rosen Press, Inc. 1974. $5.10 postpaid. See Chapter IX, "The Young Entrepreneur--Owning Your Own Business."

Management Careers for Women. Place, Irene and Armstrong, Alice. Vocational Guidance Manuals. $2.95.

Opportunities in Management Careers. Place, Irene and Robertson, Leonard. Grades 9-12. Vocational Guidance Manuals.

"Self-Employment, You're the Boss!" Career World. Vol. 3, No. 8. (April 1975): 11-16.

"The Service Station Dealer." Career World. Vol. 4, No. 6. (February 1976): 18-19.

"Small Business Operators." Career World. Vol. 1, No. 9. (Mid-May 1973): 16.

Turn Your Ideas Into Money. Cantin, Donald. Grades 9-12. Hawthorne. 1972.

"What is an EXECUTIVE?" Career World. Vol. 4, No. 8. (April 1976): 22-23.

Your Future in Your Own Business. Winter, Elmer. Richards Rosen Press, Inc. $5.10 postpaid.

Audiovisuals

Careers and Lifestyles, Cynthia Gabel: Corporate Executive. Sound filmstrips. Grades 7-9. Guidance Associates. 1974.

Careers in Business Administration. Silent film loop. Pathescope.

Running a Business. Sound filmstrip. Grades 4-8. Pathescope. 1976.

Careers in Business Administration. Sound filmstrip. Pathescope Educational Films, Inc.

Running a Business. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Free and Inexpensive

"Accounting is Business Leadership." Accounting Careers Council. National Distribution Center. Dept. A, Box 650, Radio City Station, New York, N. Y. 10019.
Single copy free.

"Airport Management--A Profession." The American Association of Airport Executives. 2029 K St., NW, Washington, D. C. 20006.

"Building a Future in a Business of Your Own," "Basics for Service Station Salesmen," "A First Step to a Successful Future." American Petroleum Institute. Division of Marketing. 1801 K St., NW, Washington, D. C. 20006.
First title is 40¢, last two are 15¢ each.

"Business Plan for Small Retailers." Small Marketers Aids #150. U. S. Small Business Administration. 1441 L St., NW, Washington, D. C. 20416.

"Career Opportunities in Automotive Service." Motor Vehicle Manufacturers Association. Educational Programs. 320 New Center Bldg., Detroit, Mi. 48202.
Single copy free.

"Hobby Shops," "Retail Florists," "Pet Shops." U. S. Small Business Administration. 1441 L St., NW, Washington, D. C. 20416.
Send for SBA publication list #115A and SBA #115B which describe different independent businesses. Single copies free.

"Jewelry and Watchmaking Schools...1976." Jewelers' circular--Keystone. Jewelers' Directory. Chilton Way, Radnor, Pa. 19089.
Single copy free to guidance counselors and career educators.

"Notes on Starting a Retail Bicycle Shop." Columbia Manufacturing Co. Westfield, Ma. 01085.

"Youth and Small Business." National Federation of Independent Business. 150 W. 20th Ave., San Mateo, Ca. 94403.
Single copy free.

"Steps to Starting a Business," "Publication Index 1974." Small Business Reporter. Bank of America. Dept. 3120, P. O. Box 37000, San Francisco, Ca. 94137.
Single copy of Index is free. Send $1.00 for the booklet "Steps..."

"Your Own Business." Mademoiselle Magazine.
Send 55¢ for pamphlet #334.

Local Resources

Personnel Management Occupations

Books, Pamphlets and Periodicals

"Careers in Personnel." Career World. Vol. 2, No. 3. (Mid-November 1973): 20-21.

"The Labor Movement: Union Business Representative." Career World. Vol. 4, No. 2. (October 1975): 26-27.

My Job Interview Guide. Livingstone, Arnold. Janus Book Publisher. 1975.

Opportunities in Personnel Management Careers. Mack, David. Grades 9-12. Vocational Guidance Manuals. 1970.

The Teenager and the Interview. Keefe, John. Richards Rosen Press, Inc. 1971.

Audiovisuals

Free and Inexpensive

"Business Agent--Labor Union." Occupation Guide #394. State of California. Department of Human Resource Development. 800 Capital Mall, Sacramento, Ca. 95814.
Single copy free.

"Careers in Personnel and Industrial Relations." American Society for Personnel Administration. 19 Church St., Berea, Ohio 44017.
Single copy free.

Career Opportunities Series #C18, "Personnel." Catalyst.
Send 95¢ for the booklet.

"This is the AFL-CIO," pamphlet #20. "Why Unions," pamphlet #41. AFL-CIO Pamphlet Dept. 815 16th St., NW, Washington, D. C. 20006.

Local Resources

Production Management Occupations

Books, Pamphlets and Periodicals

"Marketing and Distribution." Career World. Vol. 2, No. 8. (Mid-April 1974): 4-13.

"The Purchasing Agent." Career World. Vol. 4, No. 9. (May 1976): 16-17.

Audiovisuals

Free and Inexpensive

"Purchasing as a Career," "Your Career in Purchasing Management." National Association of Purchasing Management. 11 Park Pl., New York, N. Y. 10007.

First title 50¢, second title, single copy free.

Local Resources

Finance, Credit and Insurance Occupations

Books, Pamphlets and Periodicals

"Accounting." Booklet #C-1. Catalyst.

American Institute of Accountants. 666 5th Ave., New York, N. Y. 10019.

American Savings and Loan Institute. 111 E. Wacker Dr., Chicago, Il. 60601.

Casualty Actuarial Society. 200 E. 42nd St., New York, N. Y. 10017. Information on a career as a property and casualty actuary.

College of Insurance. 150 William St., New York, N. Y. 10038. Send for information about college courses and work-study programs in insurance and actuarial science.

"Figure on a Future in ACCOUNTING." *Career World*. Vol. 4, No. 4. (December 1975): 22-23.

General Adjustment Bureau. 123 William St., New York, N. Y. 10038. Write for details of formal programs for training of adjusters.

"How Accounting Adds Up." *Career World*. Vol. 2, No. 6. (Mid-February 1974): 20-21.

National Consumer Finance Association. 1000 16th St., NW, Washington, D. C. 20036.

Opportunities in Economics Careers. Williamson, Harold. Grades 9-12. Vocational Guidance Manuals. 1971.

Opportunities in Life Insurance Sales. Rosler, Lee. Vocational Guidance Manuals. $2.85 postpaid.

"Surprising Scope in Insurance Careers." *Career World*. Vol. 1, No. 9. (Mid-May 1973): 10-14.

"There's More to Banking Than Money." *Career World*. Vol. 1, No. 5. (Mid-January 1973): 9-13.

Your Future in Insurance. Sommer, Armand and Kedzie, Daniel. Grades 9-12. Richards Rosen Press, Inc. $4.80.

Your Future in Securities. Miller, Eugene. Grades 9-12. Richards Rosen Press, Inc. 1974.

Audiovisuals

Banking and Insurance. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Careers in Banking and Insurance. Sound filmstrips. Grades 9-12. Pathescope Educational Films, Inc. 1974.

Focus on America--The Northeast Region. Grades 5-8. Society for Visual Education. "The East Coast Megalopolis: A Case Study."
Examines financial power region and its future role.

Is a Career in Finance, Insurance or Real Estate for You? Counselor Films, Inc.
Runs for 15 min. Write for preview information.

Free and Inexpensive

American Bankers Association. Personnel Division. 1120 Connecticut Ave., NW, Washington, D. C. 20036.

"Careers in Property and Liability Insurance." Insurance Information Institute. 110 William St., New York, N. Y. 10038.

"Know Your Mutual Savings Bank." National Association of Mutual Savings Banks. 200 Park Ave., New York, N. Y. 10017.

"A Life Career," and "It's Up to You--A Guide to a Career in Life and Health Insurance." Institute of Life Insurance. 277 Park Ave., New York, N. Y. 10017.

"Minding the Millions," Booklet #425. U. S. Civil Service Commission. Area Office, or 1900 E St., NW, Washington, D. C. 20415.

National Association of Bank Women. 111 E. Wacker Dr., Chicago, Il. 60601.

"Our Story," "Student Membership Information," "Certificate in Management Accounting." National Association of Accountants. 919 3rd Ave., New York, N. Y. 10022.

"What Do You Want?" Association--Sterling Films.
Runs 22 min. Free on loan.

"What's It Like to Be an Accountant?" American Institute of Certified Public Accountants. 1211 Ave. of the Americas. New York, N. Y. 10036.

"Who Says a Good Insurance Job Has to Be Dull?" National Association of Insurance Women. 4848 S. Peoria, Ben Crowley Bldg., Suite 202, Tulsa, Ok. 74105.

"Why Not Choose Accounting?" and "A Career for Women, Too." American Woman's Society of Certified Public Accountants. 327 S. LaSalle St., Room 738, Chicago, Il. 60604.

"You Can Help." Insurance Information Institute. Education Division. 110 William St., New York, N. Y. 10038.
Runs 14 min. Free on loan.

Local Resources

OCCUPATIONAL CLUSTER: 4

HEALTH

General

Aim for a Job in the Allied Health Field. Richards Rosen Press, Inc. $4.80 postpaid.

Allied Medical Education Directory. American Medical Association. Department of Allied Medical Professions and Services. 535 N. Dearborn St., Chicago, Il. 60610. $7.00 per copy.

American Alliance for Health, Physical Education and Recreation. 1201 16th St., NW, Washington, D. C. 20036.

American Society of Directors of Volunteer Service. 840 N. Lake Shore Dr., Chicago, Il. 60611.

Careers and Opportunities in the Medical Sciences. Freese, Arthur. E. P. Dutton and Co. 1971.

Careers in the Health Field. Lee, Essie. Grades 9-12. Julian Messner. 1974.

"Check Up On Health Careers." Career World. Vol. 3, No. 6. (February 1975): 4-15.

Exploring Health Occupations. Arns, Kathleen Filbin and Watson, Diane E. Gregg Division, McGraw-Hill Book Co. 1976.

Guide to Medical, Dental and Allied Health Science Careers. Wischnitzer, Saul. Grades 7-12. Barron's Educational Series. 1974. $3.95.

Health and Medical Careers Handbook. Conway, Helen and Munder, Samuel. Philadelphia Public Schools. 1972.

Health Career Guide. Workbook. Grades 9-12. Fairchild Publications.

Health Care Careers. Kay, Eleanor. Grades 7-12. Franklin Watts, Inc. 1973.

"Health Careers Check-Up." Career World. Vol. 5, No. 2. (October 1976): 6-15.

The Health Careers Film Guide. DHEW Pub. No. (NIH) 72-306. Bureau of Health Resources Development. Information Staff. 9000 Rockville Pike, Bethesda, Md. 20014.

A directory of films on health jobs, many of which are free on loan--limited supply available.

How to Get Into Medical and Dental School. Shugar, Gershon J., Ph.D., Shugar, Ronald A., M.D., and Bauman, Lawrence, D.D.S. Arco Publishing Co., Inc. 1972. $4.00 paperback.

Jobs in Health Care. Englebardt, Stanley. Grades 6-8. Lothrop, Lee & Shephard. 1973. $5.50.

Paraprofessions--Careers of the Future and Present. Splaver, Sarah. Simon and Schuster. 1972. $4.95.

Your Future in Hospital Work. Kirk, Weir Richard. Arco Publishing Co., Inc. 1974.

Audiovisuals

Careers in Health. Grades 9-12. Butterick Publishing.

Careers in Health Services. Sound filmstrip. Pathescope Educational Films, Inc.

Introduction to Health Careers. Kimbrell, Mary Ellen. McKnight Publishing Co. 1975.

One in a series of activity programs which include text--activity manual, teacher's guide, four filmstrips, two cassettes, and achievement tests. Item #5207--$68.00; text--activity manual only, $1.98.

Job Opportunities Now--Group 1. Sound filmstrips. Jr.-Sr. High School. Society for Visual Education.

Series of filmstrips which includes, "Job Opportunities in a Hospital."

Making People Healthy. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Free and Inexpensive

"Allied Medical Education Fact Sheet." American Medical Association. Division of Allied Medical Services. 535 N. Dearborn St., Chicago, Il. 60610.

Bureau of Health Manpower. Office of Communications. Bldg. 31, Rm. 5-B63, 9000 Rockville Pike, Bethesda, Md. 20014.

Request financial aid, scholarship, and loan program information. Single copies of each free.

Council of Activities Coordinators. American Health Care Association. 1200 15th St., NW, Washington, D. C. 20005.

The Council does not have career literature but will answer questions and send a copy of current federal HEW regulations.

"Health Career Leaflets 1-10," "Careers That Count," "Today's Hospital--Career Center for America's Youth," and various other career leaflets on health occupations in hospitals. American Hospital Association.

Career Information. 840 N. Lake Shore Dr., Chicago, Il. 60611.
Send a stamped self-addressed, business-size (4x9½) envelope.

"Health Career Opportunities." Pamphlet #0773-1. American Nursing Home Association. 1200 15th St., NW, Washington, D. C. 20005.
Single copy free.

"How to Pay for Your Health Education: A Guide for Minority Students." DHEW Pub. No. (HRA) 74-8. Office of Communication. Health Resources Administration. Rm. 10A-31, Parklawn Bldg., 5600 Fishers Lane, Rockville, Md. 20852.
Single copy free.

National League for Nursing. 10 Columbus Circle, New York, N. Y. 10019. Send for the leaflet listing career guidance publications.
Single copy free.

"200 Ways to Put Your Talent to Work in the Health Field." National Health Council, Inc. Box 40, Radio City Station, New York, N. Y. 10019.
Single copy free.

Local Resources

There are many state, city, and regional health careers councils which originally were organized to promote health careers. Many have broadened their activities and are now called health manpower programs. As a rule, these groups have a great deal of free career literature. The exact names of these groups vary. Examples: "Arkansas Council for Health Careers," "Colorado Health Careers Council," "New York City-Wide Organization for Health Services," "South Carolina Appalachian Council."

To locate a state, city, or regional health careers council or manpower program in your area, you can: (1) Check with your school counselor. (2) Check with the public relations or personnel office of a nearby hospital. (3) Write to the National Health Council, address above. Please enclose a stamped, self-addressed, return envelope.

Medical Occupations

Books, Pamphlets and Periodicals

American Medical Association. Department of Allied Medical Professions and Services. 535 N. Dearborn St., Chicago, Il. 60610.

Send stamped, self-addressed envelope for list of approved Physician's Assistant training programs.

The American Registry of Physician's Associates. 5467 Natchez Way, Durham, N. C. 27704.

Department of Health Manpower. Division of Medical Practice. American Medical Association. 535 N. Dearborn St., Chicago, Il. 60610.

Fisher, Donald. Executive Director. American Academy of Physician's Assistants. 2120 L St. NW, Suite 210, Washington, D. C. 20037.

Ms.-M.D. Fenten, D. X. Grades 9-12. Westminster Press. 1974.

Medical School Game. Simmons, David. Drake Publishing Co., 381 Park Ave., S., New York, N. Y. 10016. 1972. $5.45 postpaid.

Outlines alternative view of medical school--not a game to play.

National Pre-Medical Newsletter. Minehart Corporation.

Send for free sample issue. The newsletter is published monthly and costs $15.00 per year for individuals.

"Newcomer on the Medical Scene: The Physician's Assistant." Career World. (February 1972): 9.

Opportunities in a Podiatry Career. Shangold, Jules and Greenberg, Frank. Vocational Guidance Manuals. 1971. $2.40 by mail.

"Physician's Assistant." Career World. Vol. 2, No. 9. (Mid-May 1974): 18-19.

"Put Your Best Foot Forward as a Podiatrist." Career World. Vol. 2, No. 3. (Mid-November 1973): 18-19.

"Women in Medicine." Mademoiselle Magazine.

Send 50¢ for a reprint.

Audiovisuals

"Horizons Unlimited," (28 min.) portrays careers in medicine and more than 200 allied fields; "Matter of Opportunity," (27 min.) focuses on opportunities for minority groups; "O. S.'s--The Vision Care Specialists," (15 min.); "The Covenant," (20 min.) portrays careers in veterinary medicine; "The Surgeon," (13½ min.) depicts a surgeon's day in a hospital. 16mm Color sound films. Modern Talking Picture Service.

Available on loan.

Free and Inexpensive

American Podiatry Association. 20 Chevy Chase Circle, NW, Washington, D. C. 20015.
Single copies of career literature free.

"A Career in Pediatrics." American Academy of Pediatrics. 1801 Hinman Ave., Evanston, Il. 60204.

"Code Blue." 16mm Color sound film. Modern Talking Picture Service.
For minority students considering a career in medicine or allied health occupations. Runs 27½ min.

"The P. A. Profession." Association of Physician Assistant Programs. 2120 L St., NW, Suite 210, Washington, D. C. 20037.
Single copy free.

Local Resources

Dental Occupations

Books, Pamphlets and Periodicals

American Dental Association. Council on Dental Education. 211 E. Chicago Ave., Chicago, Il. 60611.

"Careers in Dental Hygiene," "Certified Dental Technician Program," "A Bright Future," "Education and Training." American Dental Assistants Association. Department of Education. 211 E. Chicago Ave., Suite 1230, Chicago, Il. 60611. Some films free on loan.

Your Future in Dental Assisting. Frost, Jane. Richards Rosen Press, Inc. 1970.

Your Future in Dentistry. Vershel, Allen, D. D. S. Grades 9-12. Richards Rosen Press, Inc. 1970.

Audiovisuals

Dental Assistants. 8mm. Silent film loop. Encyclopedia Britannica.

Dental Hygienists. 8mm Silent film loop. Encyclopedia Britannica.

Dental Lab Technicians. 8mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Dentistry--The Career Choice for Women," and "Dentistry--A Changing Profession." American Dental Association. Council on Dental Education. 211 E. Chicago Ave., Chicago, Il. 60611.
Single copies free.

"Where I Want to Be--The Story of a Woman Dentist." 16mm Color sound film. Association--Sterling Films.
Free on loan.

Local Resources

Nursing Occupations

American Association of Industrial Nurses. 79 Madison Ave., New York, N. Y. 10016.

Back to Nursing: A Guide to Current Practice for Active and Inactive Nurses. Stryker, Ruth. Grades 9-up. W. B. Saunders. 1971.

Janet, the Hospital Helper. John, Hughes. Grades 7-12. Janus Book Publishers. 1975.

"Licensed Practical Nurse." Career World. Vol. 2, No. 7. (Mid-March 1974): 16-17.

Nursing as a Career. Chandler, Caroline A., M.D. and Kempf, Sharon H., R.N. Dodd, Mead & Co., Inc. 1970.

Nursing Guide. Workbook. Grades 9-12. Fairchild Publications, Inc.

Your Career in Nursing. Searight, Mary. Julian Messner. $5.29.

Your Future in Nursing Careers. Robinson, Alice, R.N. Arco Publishing Co., Inc. 1974.

Audiovisuals

Careers in Nursing. Sound filmstrip. Pathescope Educational Films, Inc.

Licensed Practical Nurses. 8 mm. Silent film loop. Encyclopedia Britannica.

Nursing. Sound filmstrip. Grades 4-8. Pathescope Educational Films, Inc. 1976.

Registered Professional Nurses. 8 mm. Silent film loop. Encyclopedia Britannica.

"School Nurse." Our School Workers. Filmstrip. McGraw-Hill Book Co. 1972.
Set of eight color filmstrips which includes other school employees as well as the school nurse.

Free and Inexpensive

"AANA Fact Book," "Approved List of Schools." American Association of Nurse Anesthetists. 111 E. Wacker Dr., Chicago, Il. 60601.
Single copies free.

The Army Nurse. 16 mm. Color sound film. Dept. of the Army. Commanding General. Fifth U. S. Army Headquarters. Audiovisual Support Center. Ft. Sam Houston, Tx.
Runs 28 min.; free on loan.

"Do You Want to Be a Nurse?" and "Practical Nursing Career 1973-74." National League for Nursing. Careers Dept. 10 Columbus Circle, New York, N. Y. 10010.
First title, 35¢ each, second title, 50¢ each. Also ask for free list of state-approved schools.

National Association for Practical Nurse Education and Service, Inc.
122 E. 42nd St., New York, N. Y. 10017.

"Nurse-Midwifery." *Mademoiselle* Magazine. 1973.
Send for reprint #342, 50¢ each.

"A Profile in Practical Nursing." National Federation of Licensed Practical Nurses. 250 W. 57th St., Suite 323, New York, N. Y. 10010.
Send 20¢ and self-addressed envelope; mark outside envelope, "Attention: Careers Pamphlet."

"Supportive Nursing Personnel in Hospitals and Other Health Care Facilities." American Hospital Association. 840 N. Lake Shore Dr., Chicago, Il. 60611.

"What is a Nurse-Midwife?" American College of Nurse-Midwives. 1000 Vermont Ave., NW, Washington, D. C. 20005.
Enclose stamped, self-addressed long envelope.

Local Resources

Health and Medical Research and Communication Occupations

Books, Pamphlets and Periodicals

American Association for Laboratory Animal Sciences. 2317 W. Jefferson St., Suite 208, Joliet, Il. 60435.
Write for a brochure that includes a list of colleges and universities offering programs in animal technology.

American Society for Pharmacology and Experimental Therapeutics. 9650 Rockville Pike, Bethesda Md. 20014.

"Itching...for a Job?" Career World. Vol. 4, No. 6. (February 1976): 34.

"Laboratory Animal Technician." Career World. Vol. 1, No. 4. (Mid-December 1972): 17.

"Science and Technical Writers--Bridge Gaps Between Progress and People." Career World. Vol. 1, No. 9. (Mid-May 1973): 17.

Your Future in Technical and Science Writing. Clark, Emerson and Root, Vernon, Richards Rosen Press, Inc. 1972. $3.99.

Audiovisuals

Free and Inexpensive

"A Career in Genetics." American Genetic Association. 1028 Connecticut Ave., NW, Washington, D. C. 20036.

"Careers in Technical Communication." Society for Technical Communication. 1010 Vermont Ave., NW, Suite 421, Washington, D. C. 20005.

Local Resources

Physical, Mental and Social Rehabilitation Occupations

Books, Pamphlets and Periodicals

American Association for Respiratory Therapy. 7411 Hines Pl., Dallas, Tx. 75235.

American Psychiatric Association. 1700 18th St., NW, Washington, D. C. 20009.

"Career Series." National Association for Mental Health. 1800 Kent St., Rosslyn, Va. 22209.
Send 60¢ for the pamphlet.

"Check Up On Health Careers." *Career World*. Vol. 3, No. 6. (February 1975): 4-15.

Council for the Advancement of Psychological Professions and Sciences. Suite 1000, 1100 17th St., NW, Washington, D. C. 20036.

"Finding a Path to Careers in Psychology." *Career World*. Vol. 1, No. 5. (Mid-January 1973): 4-8.

National Institute of Mental Health. Public Inquiries Section. 5600 Fisher Lane, Rockville, Md. 20852.
Write with specific questions on careers in psychology.

"OT IS...," American Occupational Therapy Association. 6000 Executive Blvd., Rockville, Md. 20852.
Also request information on assistant occupations.

"Open-Minded About a Career in Psychology?" *Career World*. Vol. 3, No. 7. (March 1975): 20-21.

Therapy Guide. Workbook. Grades 9-12. Fairchild Publications.

Opportunities in Psychology Careers Today. Super, Donald E. and Super, Charles. Vocational Guidance Manuals. $2.95 plus 40¢ postage.

Your Career in Physical Therapy. Darby, Patricia. Grades 9-up. Julian Messner.

Your Future in a Mental Health Career. Keyes, Fenton. Grades 9-12. Richards Rosen Press, Inc. 1976. $4.80.

Your Future in Occupational Therapy Careers. Shuff, Frances. Grades 9-12. Richards Rosen Press, Inc. 1974. $4.80.

Audiovisuals

Free and Inexpensive

"A Career in Psychology." American Psychological Association. 1200 17th St., NW, Washington, D. C. 20036.
Single copy free.

"Careers in Physical Therapy." American Physical Therapy Association. 1156 15th St., NW, Washington, D. C. 20006.
Single copy free.

"Look Into Social Work--Jobs in Health Care Settings." American Hospital Association. Career Information. 840 N. Lake Shore Dr., Chicago, Il. 60611.
Send two 13¢ stamps with each request.

"Physical Therapy Aid," and "Psychiatric Technician Trainee." Employment Development Dept., Mail Control Unit. 800 Capitol Mall, Sacramento, Ca. 95814.
Single copies free.

"The Therapeutic Recreation Specialist." National Therapeutic Recreation Society. 1601 N. Kent St., Arlington, Va. 22209.

Local Resources

Clinical Laboratory and Related Technical Occupations

Books, Pamphlets and Periodicals

Career Opportunities--Health Technicians. Kinsinger, Robert. Grades 7-12. J. G. Ferguson Publishing. 1974.

"Medical World Detectives." Career World. Vol. 2, No. 4. (Mid-December 1973): 20-21.

Audiovisuals

Medical Laboratory Technologists. 8mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

American Medical Technologists. Executive Secretary. 710 Higgins Rd., Park Ridge, Il. 60068.
Single copies free of brochures on technologists and technicians.

American Society for Medical Technology. 5555 W. Loop South, Suite 200, Bellaire, Tx. 77401.

"Answers to Your Questions About an Exciting Career in Medical Technology," and "Health Science." American Institute of Biological Sciences. Career Information Services. 1401 Wilson Blvd., Level A, Arlington, Va. 22209.

"A Career for You as a Certified Laboratory Assistant." Board of Certified Laboratory Assistants. 445 N. Lake Shore Dr., Chicago, Il. 60611.

"In a Medical Laboratory." 16mm Color sound film. American Cancer Society. 219 E. 42nd St., New York, N. Y. 10017.
Runs 28 min.; free on loan.

Registry of Medical Technologists (ASCP). Box 4872, Chicago, Il. 60680.

"What is an Operating Room Technician?" Association of Operating Room Technicians. Suite 201, 1100 W. Littleton Blvd., Littleton, Co. 80120.

Local Resources

Environmental and Public Health Occupations

Books, Pamphlets and Periodicals

American Association of Community and Junior Colleges. One DuPont Circle, NW, Washington, D. C. 20036.

Request information on two-year colleges providing occupational safety and health training.

"Careers in Occupational Medicine." No. X-2-N/C. American Occupational Medical Association. 150 N. Wacker Dr., Chicago, Il. 60606.

"Careers in Occupational Medicine." Industrial Medical Association. 55 E. Washington St., Chicago, Il. 60602.

The Directory of Training and Educational Resources in Occupational Safety and Health. National Institute of Occupational Safety and Health. Division of Training. 9503 Federal Office Bldg., 550 Main St., Cincinnati, Oh. 45202.

A 380-page work, currently at printing stage, will be available soon; write for information.

"Environmental Careers." *Career World*. Vol. 4, No. 7. (March 1976): 5-15.

"The Environmentalist." National Environmental Health Association. 1600 Pennsylvania St., Denver, Co. 80203.

Also a list of institutions offering programs in environmental health.

"Health Physics--A New Profession in the Nuclear Age." Health Physics Society. Box 156, East Weymouth, Ma. 02189.

Information on graduate programs also available on request.

"Occupational Safety and Health Training Grants." National Institute for Occupational Safety and Health. Office of Technical Publications. Post Office Bldg., Room 530. Cincinnati, Oh. 45202.

Request # HEW 76-117.

"1971 Report of the Council on Environmental Quality--Environmental Quality." U. S. Government Printing Office. Washington, D. C. 20401.

360 pages, $2.00.

OSHA Training Institute. 10600 Higgins Rd., Rosemont, Il. 60018.

"There is a Place for You in the Environmental Field." *Career World*. 7 Feb. 1972. 4-7.

Water Pollution Control Federation. 3900 Wisconsin Ave., NW, Washington, D. C. 20016.

Audiovisuals

Free and Inexpensive

"NOAH: A New Agency." National Oceanic and Atmospheric Administration. U. S. Department of Commerce. Washington, D. C. 20230.

"Scope and Function of the Professional Safety Position," "Vocational Biography--Safety Engineer," "List of Institutions Offering Degree Programs in Occupational Safety and Health." American Society of Safety Engineers. 850 Busse Hwy., Park Ridge, Il. 60068.
Single copies free.

"Toward A New Environmental Ethic," and "1971 Annual Report." U. S. Environmental Protection Agency. Washington, D. C. 20460.
Both titles free.

Local Resources

Health Administrative, Business and Clerical Occupations

Books, Pamphlets and Periodicals

American College of Hospital Administrators. 840 N. Lake Shore Dr., Chicago, Il. 60611.

Association of University Programs in Health Administration. One DuPont Circle NW, Washington, D. C. 20036.

Careers in Hospital Administration, Maintenance and Service. Workbook. Grades 9-12. Fairchild Publications, Inc.

Hospital Financial Management Association. Department CW. 840 N. Lake Shore Dr., Chicago, Il. 60611.

Your Future in Hospital and Health Services Administration. Kirk, W. Richard. Grades 9-12. Richards Rosen Press, Inc. 1976. $4.80.

Audiovisuals

Free and Inexpensive

"Hospital Admitting Clerk." Occupational brief #409. Employment Development Department. Mail Control Unit. 800 Capitol Mall, Sacramento, Ca. 95814.
Single copy free.

"Hospital Food Service Administrators," "Hospital Purchasing Agent." American Hospital Association. 840 N. Lake Shore Dr., Chicago, Il. 60611.
AHA Health Series #10. Single copies free.

Local Resources

Occupations in Other Related Health Specialties

Books, Pamphlets and Periodicals

American Home Economics Association. 2010 Massachusetts Ave., Washington, D. C. 20036.
Write for a list of publications.

"Careers in Home Economics." Career World. (Mid-November 1972): 4-8.

"Careers in Memorial Counseling." B'Nai B'Rith Vocational Service. 1640 Rhode Island Ave., NW, Washington, D. C. 20036.
35¢ each.

"Emergency Medical Technician." Career World. Vol. 4, No. 7. (March 1976): 31.

"Funeral Service as a Career." Park Publishing House.
$1.00 for a 26-page pamphlet.

"Home Economics." Career World. Vol. 5, No. 3. (November 1976): 6-17.

"RX for a Space-Age Career--The Radiopharmacist." Career World. Vol. 2, No. 2. (Mid-October 1973): 18-19.

"What Is An Optometrist?" Career Guidance Coordinator. American Optometric Association. 700 Chippewa St., St. Louis, Mo. 63119.

Your Future as a Dietitian. Travis, Betty, ed. Grades 9-12. Richards Rosen Press, Inc. 1975. $4.80.

Your Future as an Optician. Hirschhorn, Hans. Grades 7-up. Richards Rosen Press, Inc. 1970.

Your Future in Pharmacy. Kraemer, James. Grades 9-12. Richards Rosen Press, Inc. 1974. $4.80.

Audiovisuals

Dispensing Opticians and Optical Laboratory Mechanics. 8mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Advanced Training Program, EMT, Guidelines of the National Academy of Science," "Job Description, EMT-Ambulance." Emergency Medical Services Branch. U. S. Department of Transportation. Washington, D. C. 20590.

American Association of Colleges of Pharmacy. Director of Student Affairs. 8121 Georgia Ave., Silver Spring, Md. 20910.
Write for free literature on pharmacy careers in general, plus a list of institutions offering radiopharmacy programs.

"Career Opportunity." American Cemetary Association. 329 E. Broad St. Columbus, Oh. 43215.

"Dietetics..Focus on the Future," and "Be a Dietitian." American Dietetic Association. 620 N. Michigan Ave., Chicago, Il. 60611.
Single copies free.

"Food Technologist Career Packet." Institute of Food Technologists. 221 N. LaSalle St., Chicago, Il. 60601.
Single copy free.

"Funeral Service." National Funeral Directors Association. 135 W. Wells St., Milwaukee, Wi. 53203.

"Job Description--EMT, Ambulance." National Registry of Emergency Medical Technicians. 1395 Dublin--Granville Rd., Columbus, Oh. 43229.
Send a stamped, self-addressed return envelope.

"O. D.'s--The Vision Care Specialists." Modern Talking Picture Service. 2323 New Hyde Park Rd., New Hyde Park, N. Y. 10040.
16mm Color sound film available on free loan. Runs 15 min.

"The Paraoptometrics." American Optometric Association. 700 Chippewa St., St. Louis, Mo. 63119.
Single copy free.

"The Profession of Pharmacology." American Society for Pharmacology and Experimental Therapeutics. 9650 Rockville Pike. Bethesda, Md. 20014.

Local Resources

OCCUPATIONAL CLUSTER:

5

INDUSTRIAL ORIENTED

General

Books, Pamphlets and Periodicals

National Technical Information Service. U. S. Dept. of Commerce.
5285 Port Royal Rd., Springfield, Va. 22151.

Audiovisuals

Careers in Various Trade Occupations. Cassette tape program. Educational Research, Inc.

Free and Inexpensive

Local Resources

Construction Trades - Builders Occupations

Books, Pamphlets and Periodicals

AFL-CIO. Building and Construction Trades Dept. 815 16th St., NW, Washington, D. C. 20006.
This is the union headquarters, and is a source of information for apprenticeships.

Aim for a Job in Building Trades. Daly, Donald F. Richards Rosen Press, Inc. $3.95.

American Institute of Architects. Education Director. 1785 Massachusetts Ave., NW, Washington, D. C. 20036.

"Architectural Technician." Career World. (Mid-November 1972): 14.

Associated Builders and Contractors. Box 698. Glen Burnie, Md. 21061.
This organization represents contractors in non-union areas, and is a source of information for non-union apprenticeships.

Brick Institute of America. 1750 Old Meadow Rd., McLean, Va. 22101.

"Bricklayer." Career World. Vol. 2, No. 4. (Mid-December 1973): 18-19.

Bricklayers, Masons and Plasterers. International Union of America. 815 15th St., NW, Washington, D. C. 20005.

Building Wrecking. Colby, Jean. Hastings House. 1972.

Bureau of Apprenticeship and Training. U. S. Dept. of Labor. 200 Constitution Ave., NW, Washington, D. C. 20210.

"Career Opportunities in the Plumbing, Heating and Air-Conditioning Industry." Plumbing-Heating-Cooling Information Bureau. 35 E. Wacker Dr., Chicago, Il. 60601.

"Careers in Architecture." The American Institute of Architecture. 1735 New York Ave., NW, Washington, D. C. 20006.

"Construction Education Directory." Associated General Contractors of America. Education and Research Foundation. 1957 E St., NW, Washington, D. C. 20006.
$2.50 for 498-page list of community college and university programs by state.

Exploring Construction Occupations. Burns, William E., and Weagraff, Patrick J. Gregg Division. McGraw-Hill Book Co.

How Do They Build It? Sullivan, George. Westminster Press. 1972.

International Brotherhood of Electrical Workers. 1125 15th St., NW, Washington, D. C. 20005.
Write with specific questions on electrical workers in construction.

Jobs in Construction. Liebers, Arthur. Lothrup, Lee and Shepard Co. $5.50.

"Nailing Down a Career in the Building Trades." Career World. Vol. 3, No. 3. (November 1974): 8-17.

National Association of Home Builders. 1625 L St., NW, Washington, D. C. 20036.

National Association of Women in Construction. 2800 W. Lancaster, Ft. Worth, Tx. 76107.
This organization will answer specific questions on opportunities for women in the construction industry.

Opportunities in an Architecture Career. Piper, Robert. Vocational Guidance Manuals. 1970.

Opportunities in Carpentry Careers. Sheldon, Roger. Vocational Guidance Manuals. $2.45 paperback.

Opportunities in Electrical Trades. Wood, Robert. Vocational Guidance Manuals. $2.45 paperback.

"Putting it All Together as a BRICKLAYER." Career World. Vol. 5, No. 1. (September 1976): 18-19.

"Work with a Flare, WELDER." Career World. Vol. 4, No. 3. (November 1975): 24-25.

The World of Construction. McKnight Publishing Co.

You Can Be a Carpenter. Liebers, Arthur. Lothrop, Lee and Shepard. 1973.

Audiovisuals

America's Urban Crisis. "The Housing Crisis." Sound filmstrip. L. W. Singer Company.
Runs 15 3/4 min., 60 frames.

Bricklayers. 8mm Silent film loop. Encyclopedia Britannica.

"Build a Better Life." 16 mm film. Modern Talking Pictures. Client Service Office.
Runs 14 min., available on loan. Write for address of distribution office nearest you.

Building the Nation. Sound filmstrip. Pathescope. 1976.

Careers and Lifestyles, Jimmy Sandrillo: Independent Carpenter. Sound filmstrips. Guidance Associates. 1974.

Careers in Construction. Sound filmstrip. Pathescope Educational Films, Inc.

Carpenters. 8mm. Silent film loop. Encyclopedia Britannica.

Cement Masons. 8 mm. Silent film loop. Encyclopedia Britannica.

Electricians. 8 mm. Silent film loop. Encyclopedia Britannica.

Introduction to Construction Careers. Lux, Donald. McKnight Publishing Co. 1975.

Activity programs include text-activity manual, teacher's guide, four filmstrips, two cassettes, achievement tests. Complete program $68.00. Text-activity manual only, $1.98.

Operating Engineers. 8 mm. Silent film loop. Encyclopedia Britannica.

People Who Make Things. Guidance Associates.

Two skilled construction workers describe their part in assembling DC 10 airplanes; a model builder shows how he builds an entire city to scale.

Plumbers and Pipefitters. 8 mm. Silent film loop. Encyclopedia Britannica.

Sheet Metal Workers. 8 mm. Silent film loop. Encyclopedia Britannica.

Story of Building a House. Filmstrips. Eye Gate House, Inc. 1970.

Surveyors. 8 mm. Silent film loop. Encyclopedia Britannica.

Welders--Oxygen and Arc Cutters. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Build a Better Life: Try the Building Trades." National Association of Home Builders. c/o Manpower Dept. 15th and M St., NW, Washington, D. C. 20005.

Single copy free.

"Careers in Construction." Associated Builders & Contractors. Box 8733, International Airport, Baltimore, Md. 21240.

Single copy free.

"Construction: Building Your Future." General Building Contractors Association, Inc. Suite 1212, 2 Penn Plaza, Philadelphia, Pa. 19102. $1.25.

"Construction Opportunities Unlimited." Associated General Contractors of America. 1957 E St., NW, Washington, D. C. 20006.

Single copy free.

"A Career for Today...and Tomorrow." National Electrical Contractors Association. Public Relations Services. 7315 Wisconsin Ave., NW, Washington, D. C. 20014.
Single copy free.

"A Program for Architectural Technicians' Training." American Institute of Architects. Dept. of Education and Research. 1735 New York Ave., NW, Washington, D. C. 20006.
Single copy free.

"Top Hand in the Building Trades--Carpentry as a Career." United Brotherhood of Carpenters and Joiners of America. c/o Apprenticeship & Training Dept. 101 Constitution Ave., NW, Washington, D. C. 20001.
Single copy free.

"A World of Opportunity in Construction, 1976." Construction Advancement Foundation. Communications Dept. Box 4085, Hammond, In. 46324.
Single copy of magazine free to guidance counselors and career educators.

Local Resources

Construction Trades - Finishers Occupations

Books, Pamphlets and Periodicals

International Brotherhood of Painters and Allied Trades. Education Director. 1750 New York Ave., NW, Washington, D. C. 20006.

National Joint Painting, Decorating and Drywall Apprenticeship Committee. 1709 New York Ave., NW, Washington, D. C. 20006.

Audiovisuals

Painters and Paperhangers. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

Local Resources

Extraction of Raw Materials Occupations

Books, Pamphlets and Periodicals

American Geological Institute. Career Guidance Dept. 5205 Leesburg Pike, Falls Church, Va. 22041.

Department of the Interior. 1. Bureau of Land Management. 2. Bureau of Mines. 3. Bureau of Reclamation. 4. Geological Survey. 5. Office of Coal Research. 6. Office of Minerals and Solid Fuels. 7. Office of Oil and Gas. 8. Office of Water Resources Research. Washington, D. C. 20240.

"Engineering Careers in the Coal Industry." National Coal Association. 1130 17th St., NW, Washington, D. C. 20036.

"Geologist." Career World. Vol. 4, No. 8. (April 1976): 28-29.

National Water Well Association. 500 W. Wilson Bridge Rd., Worthington, Oh. 43085.

Opportunities in Geology and Geological Engineering. Snelgrove, Alfred K. Vocational Guidance Manuals. 1970. $1.95 in paperback.

"Skills and Occupations of People in the United States Oil and Gas Industries." National Petroleum Council. 601 Commonwealth Building. 1625 K St., NW, Washington, D. C. 20006. $2.75 each.

Audiovisuals

Field Trips Out of the Ordinary: To an Oil Well, Coal Mine. Sound filmstrips. Eye Gate House, Inc. 1973.

"Is a Career in Mining, Petroleum or Gas Production for You?" Counselor Films, Inc. 1975.
Write for preview information.

Free and Inexpensive

American Congress on Surveying and Mapping. Rm. 430, Woodward Bldg., 15th and H Sts., NW, Washington, D. C. 20006.

"Careers in Exploration Geophysics." Society of Exploration Geophysicists. Box 3098, Tulsa, Ok. 74101.
Single copy free.

"Careers in Petroleum Engineering." Society of Petroleum Engineers of AIME. 6200 N. Central Expressway, Dallas, Tx. 75206.
Single copy free.

"Geology: Science and Profession." "Geotimes Magazine." American Geological Institute. Publications Dept. 5205 Leesburg Pike, Falls Church, Va. 22041.
Single copies $1.00 each.

"Penetrating New Frontiers," "Do You Want to be a Coal Mining Engineer?" Society of Mining Engineers of AIME. 540 Arapeen Dr., P. O. Box 8800, Salt Lake City, Ut. 84108.
Single copies free.

"Petroleum Marketing--A Future for You." American Petroleum Institute. 2101 L St., NW, Washington, D. C. 20037.
Each copy 20¢.

Local Resources

Manufacturing and Production Occupations

Books, Pamphlets and Periodicals

Aim for a Job Working with Your Hands. Todd, Ronald D. Richards Rosen Press, Inc. 1975. $4.80.

American Bakers Association. 1700 Pennsylvania Ave., NW, Suite 650, Washington, D. C. 20006.

Associated Retail Bakers of America. 731-735 W. Sheridan Rd., Chicago, Il. 60613.

"Directory of Craft Courses." American Crafts Council. Publication and Sales Dept. 44 W. 53rd St., New York, N. Y. 10019. $3.00.

Exploring Occupations in Engineering & Manufacturing. The Careers in Focus Series. Resnick, Harold S. and Gradwell, John B. Gregg Division. McGraw-Hill Book Co. 1976.

"'Hands-On' Jobs in Manufacturing." Career World. Vol. 2, No. 2. (Mid-October 1973): 14.

International Association of Machinists and Aerospace Workers. 1300 Connecticut Ave., NW, Washington, D. C. 20036.

"The Jeweler." Career World. Vol. 5, No. 1. (September 1976): 20-21.

Jobs in Manufacturing. Houlehen, Robert J. Lothrop, Lee and Shepard. 1973.

"Mechanical Engineers." #EC-70-70ME. Engineers Council for Professional Development. 345 E. 47th St., New York, N. Y. 10017.

Millions of Cars--From Drawing Board to Highway. Butler, Hal. Julian Messner. 1972.

"Minimum Requirements for Training of Welders." American Welding Society. 2501 NW 7th St., Miami, Fl. 33125. $2.00.

Opportunities in Drafting Today. Stern, Benjamin J. Vocational Guidance Manuals. 1975. $3.95 in paperback.

Opportunities in Industrial Design Careers. Pulos, Arthur. Vocational Guidance Manuals. 1970.

Opportunities in Mechanical Engineering. Konzo, Seichi. Vocational Guidance Manuals. 1971.

"The Technological Revolution and the Many Faces of Engineering." Career World. Vol. 4, No. 2. (October 1975): 4-15.

"Tool and Die Makers." Career World. Vol. 2, No. 5. (Mid-January 1974): 18-19.

All-Round Machinists. 8 mm. Silent film loop. Encyclopedia Britannica.

America: People, Products, and Resources. "Machines," "Steel," "Oil." Filmstrips. Valiant, Inc. 1972.

Building Industry. "We Visit a Lumber Mill," "Bricks, Blocks and Beams." Educational Projections Corp. 1971.

Career Opportunities II. "Automation." Filmstrip. Popular Science Audio Visuals. 1970.

Careers in Engineering. Sound filmstrip. Pathescope Educational Films, Inc.

Field Trips Out of the Ordinary: To a Steel Mill. Sound filmstrips. Eye Gate House, Inc. 1973.

Glaziers. 8 mm. Silent film loop. Encyclopedia Britannica.

How Things are Made. "Assembling a Car," "Forming a Can," "Processing Soup," "Creating a Movie," "Making Clothing," "Crafting a Chair." Eye Gate House, Inc. 1973.

"Is a Career as a Technician for You?" Counselor Films, Inc. 1972.
Write for preview information.

Putting Science to Work. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Working in U. S. Communities. "Detroit: Manufacturing Community." Society for Visual Education. 1970.
Runs 14 min., 52 frames.

Free and Inexpensive

"Accredited Programs Leading to Degrees in Engineering Technology in the U. S.," (25¢); "Aerospace Engineering," "Chemical Engineering," "Industrial Engineering," "Metallurgical Sciences," (free). Engineers Council for Professional Development. 345 E. 47th St., New York, N. Y. 10017.

"Automotive Engineering." Society of Automotive Engineers. 2 Pennsylvania Plaza, New York, N. Y. 10001.

"Can I Be a Technician?" General Motors Bldg., Detroit, Mi. 48202.

"Career for the Future." American Society of Mechanical Engineers. 345 E. 47th St., New York, N. Y. 10017. 25¢.

"A Career in Industrial Engineering," "Problem Solvers of the 1970's--A Career in Industrial Engineering." Institute of Industrial Engineering. 25 Technology Park/Atlanta, Norcross, Ga. 30071.

"Career Opportunities in Ceramic Engineering." American Ceramic Society. Ceramic Education Council. 65 Ceramic Dr., Columbus, Oh. 43214.

"Careers in Chemistry: Questions and Answers," "Career Opportunities." American Chemical Society. 1155 16th St. NW, Washington, D. C. 20036.
Single copies free.

"Careers in the Crafts." International Association of Machinists & Aerospace Workers. Machinists Bldg., Rm. 909, 1300 Connecticut Ave., NW, Washington, D. C. 20036.

"Careers in Metallurgy, Materials Science and Metallurgical Engineering." The Metallurgical Society of AIME. 345 E. 47th St., New York, N. Y. 10017.
Single copy free.

"Engineering--A Career of Opportunity," "The Certification of Engineering Technicians." Institute for the Certification of Engineering Technicians. National Society of Professional Engineers. 2029 K St., NW, Washington, D. C. 20006.
Single copies free.

"Federal Careers for Technicians in Engineering and Physical Science." U. S. Civil Service Commission. 1900 E St., NW, Washington, D. C. 20415.
Also, job announcements for current openings in any specific field. Single copies free.

"The Golden Touch." Retail Jewelers of America. 1025 Vermont Ave., NW, Washington, D. C. 20005.
Also list of jewelry and watchmaking schools. Single copies free.

"Jewelry and Watchmaking Schools...1974." Manufacturing Jewelers and Silversmiths of America, Inc. 340 Howard Bldg., 155 Westminster St., Providence, R. I. 02903.

Manufacturing Chemists Association. 1825 Connecticut Ave., NW, Washington, D. C. 20009.

National Association of Trade and Technical Schools. 1601 18th St., NW, Washington, D. C. 20009.

"Opportunities in the Welding Industry." American Welding Society. 2501 NW 7th St., Miami, Fl. 33125.

"Working in Crafts." Mademoiselle Magazine.
Send 35¢ for reprint.

Local Resources

Maintenance, Service and Repair Occupations

Books, Pamphlets and Periodicals

"Air-Conditioning, Refrigeration and Heating Service people (Mechanics)." Career World. Vol. 3, No. 2. (October 1974): 18-19.

Associated Locksmiths of America. 11 Elmendorf St., Kingston, N. Y. 12401.

Automotive Service Industry Association. 230 N. Michigan Ave., Chicago, Il. 60601.

Certified Automotive Repairmen's Society. 56th and Chestnut Sts., Philadelphia, Pa. 19139.

Cycling Activities Dept. Schwinn Bicycle Co., 1856 N. Kostner Ave., Chicago, Il. 60639.
A 2-volume service manual available for $20.00.

"Diesel Mechanic." Career World. Vol. 4, No. 3. (November 1975): 20-21.

"Fixing on a Future as a Repair Person or Mechanic." Career World. Vol. 3, No. 7. (March 1975): 8-18.

Glenn's Complete Bicycle Manual. Crown Publishers. $6.95 plus 75¢ by mail.

"Jewelers and Jewelry Repair People: Workers with Many Facets." Career World. Vol. 2, No. 1. (Mid-September 1973): 15.

"Keep Things Working as an APPLIANCE REPAIRER." Career World. Vol. 4, No. 4. (December 1975): 18-19.

National Automotive Technician Certification Board. 4001 Warren Blvd., Hillside, Il. 60162.

Piano Technicians Guild. Box 1813, Seattle, Wa. 98111.

"You as a Camera Repair Technician." Career World. Vol. 4, No. 2. (October 1975): 28-29.

Your Future in Air Conditioning and Refrigeration. Daly, Donald. Arco Publishing Co. 1974.

Audiovisuals

Air-Conditioning and Refrigeration Mechanics. 8mm. Silent film loop. Encyclopedia Britannica.

Airplane Mechanics. 8mm. Silent film loop. Encyclopedia Britannica.

Appliance Servicemen. 8mm. Silent film loop. Encyclopedia Britannica.

Automobile Mechanics. 8 mm. Silent film loop. Encyclopedia Britannica.

Automotive Body Repairmen. 8 mm. Silent film loop. Encyclopedia Britannica.

The Automotive Mechanic. Sound filmstrip. Society for Visual Education.

Careers in Automotive Service and Repair. Sound filmstrip. Pathescope Educational Films, Inc.

Careers in Repair Work. Sound filmstrip. Pathescope Educational Films, Inc.

Repairing Cars and Trucks. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Repairing Equipment. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

"So You Want to be a Home Appliance Service Technician." 16 mm. film. Vocational Films.
Runs 11 min.; may be rented for $14.00 for 3 days.

Television and Radio Service Technicians. 8 mm. Silent film loop. Encyclopedia Britannica.

Truck Mechanics and Bus Mechanics. 8 mm. Silent film loop. Encyclopedia Britannica.

Vending Machine Mechanics. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Become a Refrigeration and Air-Conditioning Service Engineer." Refrigeration Service Engineers Society. 2720 Des Plaines Ave., Des Plaines, Il. 60018.
Single copy free.

"Building Maintenance Services." Small Business Reporter. Bank of America. Dept. 3120, Box 37000, San Francisco, Ca. 94137. $1.00

"Camera Repairmen." Vocational Biographies, Inc.
Single copy 50¢.

"Career Opportunities in Automotive Service." Motor Vehicle Manufacturers Association, Inc. 320 New Center Bldg., Detroit, Mi. 48202.
Single copy free.

"Electric Sign Servicemen." National Electric Sign Association. 2625 Butterfield Rd., Oak Brook, Il. 60521.
Single copy free.

"National Apprenticeship and Training Standards for Automobile Mechanic, Body Repairer, and Painter." Bureau of Apprenticeship. Manpower Administration and Training. U. S. Dept. of Labor. 200 Constitution Ave., NW, Washington, D. C. 20210.

National Institute for Automotive Service Excellence. 1825 K St., NW, Washington, D. C. 20006.

"1974 Bibliography." Automotive Service Industry Association. 230 N. Michigan Ave., Chicago, Il. 60601.
Listing of schools; single copy free.

"Schools and Colleges," "Career Opportunities." Industrial Designers Society of America. 1750 Old Meadow Rd., McLean, Va. 22101.
Each leaflet 25¢.

"Standards for Apprenticeship in Photographic Equipment Repair." Bureau of Apprenticeship and Training. Manpower Administration. U. S. Dept. of Labor. 200 Constitution Ave., NW, Washington, D. C. 20210.
Single copy free.

"Your Career as an Appliance Service Technician." Association of Home Appliance Manufacturers. 20 N. Wacker Dr., Chicago, Il. 60606.
Single copy free.

Local Resources

Communications - Graphic Occupations

Books, Pamphlets and Periodicals

Aim for a Job in Cartooning. Fixman, Adeline. Richards Rosen Press, Inc. 1976. $4.80.

American Industrial Arts Association. 1201 16th St., NW, Washington, D. C. 20036.

Black on White and Read All Over. The Story of Printing. Barker, Albert. Julian Messner. 1971.

"Career Guidance in Illustration and Graphic Art." Society of Illustrators. 128 E. 63rd St., New York, N. Y. 10021. $2.00.

Careers in Newspaper Advertising. Scrivner, W. H. Interstate Printers and Publishers, Inc.

A Day in the Life of the New York Times. Adler, Ruth. J. B. Lippincott Co. 1971.

"Draw Your Career Plans in DRAFTING." Career World. Vol. 4, No. 7. (March 1976): 20-21.

Exploring Occupations in Communication and Graphic Arts. Schnirel, James R. and Jenkins, Ron H. Gregg Division, McGraw-Hill Book Co. 1976.

A First Book of Advertising. Pompian, Richard. Franklin Watts, Inc. 1970.

"Jobs in Journalism." Career World. Vol. 2, No. 7. (Mid-March 1974): 4-14.

"Lithographic Printer." Career World. Vol. 3, No. 5. (January 1975): 20.

"Map Your Future as a CARTOGRAPHER." Career World. Vol. 4, No. 5. (January 1976): 18-19.

Newspaper Careers. Posters. J. Weston Walch Publisher.

Opportunities in Graphic Communications, The Printing Industry. Reinfeld, George. Vocational Guidance Manuals. 1971.

Opportunities in Industrial Design. Pulos, Arthur. Vocational Guidance Manual. 1970.

Photographic Market Place. McDarrah, F. W., ed. R. R. Bowker Co. 1975. $14.95.
New publication--will be available in some libraries.

The Student Journalist and Creative Photography. Ward, William G. Richards Rosen Press, Inc. 1976. $9.66.

The Student Journalist and Creative Writing. Ward, Bill. Richards Rosen Press, Inc. 1971. $4.80.

The Student Journalist and Effective Writing Style. Reddick, Bryan. Richards Rosen Press, Inc. 1976. $7.97.

The Student Journalist and Sportswriting. Stapler, Harry. Richards Rosen Press, Inc. 1974. $7.97.

"Surveyor." Career World. Vol. 2, No. 7. (Mid-March 1974): 18.

"A Wide-Angle View of Photography Careers." Career World. Vol. 3. No. 7. (March 1975): 22-23.

Writing Careers. Williams, III, Gurney. Franklin Watts, Inc. 1976.

Your Future in Medical Illustrating: Art and Photography. Nakamura, Julia and Nakamura, Massy. Richards Rosen Press, Inc. 1971. $4.80.

Your Future in Publishing. Corwen, Leonard. Richards Rosen Press, Inc. 1973.

Audiovisuals

Careers in Graphic Arts. Sound filmstrip. Pathescope Educational Films, Inc.

Careers in Journalism. Sound filmstrip. Pathescope Educational Films, Inc.

Covering the News. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Designing and Printing. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

The Newspaper Reporter. Sound filmstrips. Society for Visual Education.

People Who Organize Facts. Guidance Associates.
A sports editor communicates his own fascination with facts and figures.

Photographers. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

Bibliography of Books on Journalism Careers. Magazine Publishers Association. Information Center. 575 Lexington Ave., New York, N. Y. 10022.

"The Big Story." The Society of Professional Journalists, Sigma Delta Chi. 35 E. Wacker Dr., Chicago, Il. 60601.

"Book Publishing Jobs." *Mademoiselle* Magazine. 50¢.

"Careers in the Business Press." American Business Press. 205 E. 42nd St., New York, N. Y. 10017.
Single copy free.

"Careers in Geography." Association of American Geographers. 1710 16th St., NW, Washington, D. C. 20009.
Single copy free.

"Careers in Graphic Communitations," and "School Directory." Graphic Arts Technical Foundation. 4615 Forbes Ave., Pittsburgh, Pa. 15213.
Single copies free.

"Careers in Printing." Rochester Institute of Technology. Public Relations Dept. One Lomb Memorial Dr., Rochester, N. Y. 14608.
Single copy free.

"Careers in Surveying and Mapping." American Congress on Surveying and Mapping. 733 15th St., NW, Washington, D. C. 20005.
Single copy free.

"Drafting as a Career." American Institute for Design and Drafting. 3119 Price Rd., Bartlesville, Ok. 74003.
Single copy free.

"Focus on Your Future." Professional Photographers of America. 1090 Executive Way, Oak Leaf Commons, Des Plaines, Il. 60018.
Single copy free.

Graphic Communications: They Used to Call it Printing. E. I. DuPont de Nemours and Co. Advertising Dept. Wilmington, De. 19898.
Film free on loan to schools.

International Association of Business Communicators. 2108 Braewick Circle, Akron, Oh. 44313.

"Jobs and Opportunities for Writers." *Writer's Digest.*
Single copy 50¢.

"Journalism Scholarship Guide" and "A Newspaper Career and You." Newspaper Fund. Box 300, Princeton, N. J. 08540.
Also request a free journalism career information kit.

The Journalists. #4613. Modern Talking Picture Service.
Free on loan.

"List of Accredited Programs in Journalism, 1973-74." Association for Education in Journalism. School of Journalism. University of Missouri. Columbia, Mo. 65201.

"Photography Is...," "Photography in Your Future," "A Survey of Motion Picture and Still Photography," and "Graphic Arts Instruction." Eastman Kodak Co. Dept. 412L, 343 State St., Rochester, N. Y. 14650.
These pamphlets and others are listed in the "Index to Kodak Information." Single copies free.

"Selected Bibliography of Audiovisual Aids." Southern Illinois University School of Journalism. Carbondale, Il. 62901. $1.00.

Society of Photo-Technologists. Box 19308, Denver Co. 80219.
Send 25¢ and a stamped, self-addressed envelope for a list of schools offering camera repair.

"Your Career in Professional Charting." Aeronautical Chart and Information Center. 8900 S. Broadway, St. Louis, Mo. 63125.
Single copy free.

"Your Future in Daily Newspapers." American Newspaper Publishers Association. Box 17407. Dulles International Airport, Washington, D. C. 20041.
Single copy free.

Local Resources

Communications - Electronic Occupations

Books, Pamphlets and Periodicals

Action! Camera! Super 8 Cassette Film Making for Beginners. Carrier, Rick and Carroll, David. Charles Scribner's Sons. 1972.

The American Film Institute's Guide to College Courses in Film and Television. AFI. Membership Dept. Kennedy Center for the Performing Arts, Washington, D. C. 20566. 1975. $6.95.

Career Opportunities--Engineering Technicians. Brooking, Walter. J. G. Ferguson Publishing Co. 1974.

"Careers in Broadcast Journalism." Radio-Television News Directors Association. Station WKAR, Michigan State University. East Lansing, Mi. 48823.
Send a gummed, self-addressed mailing label with the request.

"Careers in Educational Broadcasting." National Association of Educational Broadcasters. Publications Office. 1346 Connecticut Ave., NW, Washington, D. C. 20036.

"Careers in Television." National Association of Broadcasters. 1771 N St., NW, Washington, D. C. 20036.

"Do You Want to be an Electronic Technician?" Career World. Vol. 2, No. 5. (Mid-January 1974): 16-17.

The Electric Journalist. Anderson, Chuck. Praeger Publishers. 1973.

Exploring Occupations in Electricity and Electronics. Gregg Division. McGraw-Hill Book Co., New York, N. Y. 1976.

Films Deliver: Teaching Creatively with Film. Schillaci, Anthony. Citation Press. 1970.

Getting Into Broadcast Journalism: A Guide to Careers in Radio and TV. Jackson, Gregory. Hawthorn Books. 1974.
1-4 copies $6.95 each, 5 copies and over $6.25 each.

Jobs in Communications. Wakin, Edward. Lothrop, Lee and Shepard. 1974.

So You Want to be a Sportscaster. Coleman, Ken. Hawthorn Books. 1973.

TV and Radio Careers. Fenton, D. X. Franklin Watts, Inc. 1976.

"Television Careers." Television Information Office. 745 5th Ave., New York, N. Y. 10022.
A bibliography.

Your Future in Broadcasting. Rider, John R. Richards Rosen Press, Inc. 1971. $4.80.

Your Future in the New World of Communications. Zacharis, John C., Richards Rosen Press, Inc. 1975. $4.80.

Audiovisuals

The Broadcast Technician. Sound filmstrips. Society for Visual Education.

Linemen and Cable Splicers. 8 mm. Silent film loop. Encyclopedia Britannica.

People Who Work in Science: A Recording Engineer. Sound filmstrips. Guidance Associates.

Telephone Craftsmen. 8 mm. Silent film loop. Encyclopedia Britannica.

The Telephone Installer. Sound filmstrips. Society for Visual Education.

Telephone and PBX Installers and Repairmen. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Careers in Broadcast News." Radio-Television News Directors Association. RTNDA Executive Secretary. WKAR. Michigan State University. East Lansing, Mi. 48824.

"Careers for You in Motion Pictures, Television, Photo Science, Photoinstrumentation, Instructional Technology...as Engineers/Scientists/Creative Production Personnel." Society of Motion Picture and Television Engineers. 862 Scarsdale Ave., Scarsdale, N. Y. 10583.

"Careers in Radio" and "Careers in Television." National Association of Broadcasters. Public Relations. 1771 N. St., NW, Washington, D. C. 20036.

"The Electronics Service Technician." Electronic Industries Association. 2001 Eye St., NW, Washington, D. C. 20006.

"So You Want to be an Electronics Technician." National Alliance of TV and Electronic Service Association. 5908 S. Troy St., Chicago, Il. 60620.

Single copy free; send a stamped, self-addressed, business-size envelope.

Local Resources

Electronics and Instrumentation Occupations

Books, Pamphlets and Periodicals

Audiovisuals

Assembly Occupations--Electronics. 8 mm. Silent film loop. Encyclopedia Britannica.

Careers in Electronics. Sound filmstrips. Pathescope Educational Films, Inc.

Electronics. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Can I be a Technician? Let's Find Out." and "What's it Like to be a Technician?" The General Electric Company. Room 901, 570 Lexington Ave., New York, N. Y. 10022.
Single copies free.

"Career Opportunities for You in the Measurement and Control Industry." Scientific Apparatus Makers Association. 370 Lexington Ave., New York, N. Y. 10017.

"Electrical and Electronic Engineering." Engineers' Council for Professional Development. 345 E. 4th St., New York, N. Y. 10017.

"A Rewarding Technical Career in Instrumentation Awaits You." Instrument Society of America. 400 Stanwix St., Pittsburgh, Pa. 15222.
Single copy free.

"What Electrical Engineering is All About." The Institute of Electrical and Electronic Engineers. 345 East 47th St., New York, N. Y. 10017.

Local Resources

Energy and Power Occupations

Books, Pamphlets and Periodicals

American Association for the Advancement of Science. 1515 Massachusetts Ave., NW, Washington, D. C. 20005.
Send $2.00 for Science, special issue on energy. April 19, 1974, or check at library.

"Careers with a 'Powerful' Future." Career World. Vol. 3, No. 1. (September 1974): 8-17.

Energy in the World of the Future. Hellman, Hal. J. B. Lippincott Co. 1973.

"Energy Research." Career World. Vol. 4, No. 9. (May 1976): 18-19.

National Science Foundation. Dr. Alfred J. Eggers, Jr. Washington, D. C. 20550.

The Whole Earth Energy Crisis: Our Dwindling Sources of Energy. Woodburn, John H. G. P. Putnam's Sons. 1973. $4.89.

"Your Career in Fluid Power." National Fluid Power Association. 3333 N. Mayfair Rd., Milwaukee, Wi. 53222.

Audiovisuals

Careers in Public Utilities. Sound filmstrip. Pathescope Educational Films, Inc.

Customer Service Occupations (Electric Power Industry.) 8 mm. Silent film loop. Encyclopedia Britannica.

Field Trips Out of the Ordinary: To a Nuclear Plant. Sound filmstrip. Eye Gate House, Inc. 1973.

Focus on America--The Pacific States. "Bonneville Dam: Powerhouse of the Columbia River." Society for Visual Education.

Providing Public Utilities. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Putting Electricity to Work. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Transmission and Distribution Occupations (Electric Power Industry). 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"The Challenge of Energy and Environment." UOP Inc. 10 UOP Plaza, Algonquin and Mt. Prospect Rds., Des Plaines, Il. 60016.
Single copy free.

"Nuclear Engineering," and "Nuclear Engineering Education for the Disadvantaged." American Nuclear Society. 244 E. Ogden Ave., Hinsdale, Il. 60521.
Single copies free.

"Nuclear Engineering," "Industrial Report 1974-75" and "Nuclear Power and the Environment." University of Missouri--Rolla. Dr. D. Ray Edwards, Chairman, Nuclear Engineering. Rolla, Mo. 65401.
Single copies free.

"Nuclear Engineering in Your Future." American Society for Engineering Education. 1346 Connecticut Ave., NW, Washington, D. C. 20036.
Also other engineering specialties career literature.
Single copies free.

"Where Else Can We Get Energy?" Changing Times. Kiplinger Washington Editors. Editor's Park. 3401 East West Highway, Hyattsville, Md. 20782.
Check your library for July 1974 issue of Changing Times, or send 60¢ for a back copy.

Local Resources

OCCUPATIONAL CLUSTER: **6**

PERSONAL AND PUBLIC SERVICE

General

Books, Pamphlets and Periodicals

"Bright Prospects for PERSONAL SERVICE CAREERS." Career World. Vol. 4, No. 9. (May 1976): 4-13.

Careers in Urban Affairs. Asbell, Bernard. Peter Wyden, Inc. 1970.

Exploring Occupations in Personal Services, Hospitality, and Recreation. Vorndran, Barbara Sethney. Gregg Division, McGraw-Hill Book Co. 1976.

Exploring Occupations in Public and Social Services. Burns, William E. and Weagraff, Patrick J. Gregg Division, McGraw-Hill Book Co. 1976.

Jobs in Fine Arts and Humanities. Berger, Melvin. Wm. Morrow and Co.

Jobs in Personal Services. Criner, Beatrice. Wm. Morrow and Co.

Jobs in Public Service. Criner, Beatrice. Wm. Morrow and Co.

"Personal Service Occupations." Career World. Vol. 1, No. 7. (Mid-March 1973): 8-13.

"Public Service: Working for Uncle Sam." Career World. Vol. 2, No. 6. (Mid-February 1974): 5-16.

Audiovisuals

Serving the Community. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Workers for the Public Welfare. Eye Gate House, Inc. 1973.

Free and Inexpensive

Local Resources

Hospitality and Recreation Occupations

Recreation

Books, Pamphlets and Periodicals

Blueprinting Your Coaching Career. Fuoss, Donald. Pilot Books. 1973. $2.50 in paperback.

Boy Scouts of America. Highway 1, North Brunswick, N. Y. 08902.
Write to the Professional Recruiting Division for career pamphlets.

Club Managers Association of America. 5530 Wisconsin Ave., NW, Washington, D. C. 20015.

Coach and Athlete Magazine. 200 S. Hull St., Montgomery, Al. 36104.

Directory of Professional Preparation Programs in Recreation, Parks, and Related Areas. American Alliance for Health, Physical Education and Recreation. 1201 16th St., NW, Washington, D. C. 20036. $2.50.

"Jobs in Physical Education." Career World. Vol. 2, No. 6. (Mid-February 1974): 22-23.

Jobs in Recreation. Dobrin, Arnold. Wm. Morrow and Co.

Life in the Pit, the Deacon Jones Story. Libby, Bill. Doubleday and Co. $5.95.

National Football League. 410 Park Ave., New York, N. Y. 10022.

"Nursing Home Activities Coordinator." Career World. Vol. 4, No. 6. (February 1976): 16-17.

Professional Ski Instructors of America, Inc. 1726 Champa, Rm. 300, Denver, Co. 80202.
Write with specific questions on ski instructors' jobs.

"Recreation Careers." Career World. Vol. 3, No. 4. (December 1974): 8-18.

"Seabreeze." Western Surfing Association. 2024 W. Cliff Dr., Santa Cruz, Ca. 95060.
Subscription $2.50 a year.

Scholastic Coach Magazine. 50 W. 44th St., New York, N. Y. 10036.

Summer Employment Directory of the U. S.-- 1975. National Directory Service. $6.95.

Your Career in Parks and Recreation. McCall, Virginia. Julian Messner. 1970.

Audiovisuals

Careers in the Leisure Time Industry. Sound Filmstrip. Pathescope Educational Films, Inc.

Providing Recreation. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Public Recreational Facilities. Film loop. Doubleday and Co. 1973.

Free and Inexpensive

"Athletic Training Careers." National Athletics Trainers Association. School of Health, Physical Education and Recreation. Indiana State University, Terre Haute, In. 47809.

"Calendar of Forthcoming Events and Teacher Training Workshops," and "Publications List." United States Tennis Association. Education and Research Center. 71 University Pl., Princeton, N. Y. 08540.
Single copies free.

"Careers in Camping," and "So You Would Like a Job in a Summer Camp!" American Camping Association. Bradford Woods, Martinsville, In. 46151. Single copies free.

"Dance Careers for Men and Women," and "This is Physical Education." American Association for Health, Physical Education and Recreation. 1201 16th St., NW, Washington, D. C. 20036.

"Recreation Management." National Industrial Recreation Association. 20 N. Wacker Dr., Chicago, Il. 60606. 50¢.

Theater Communications Group. 15 E. 41st St., New York, N. Y. 10017.
Send for free list of regional theaters.

"This Way," and "What Will Summer Do for You?" and "TOFS." Girl Scouts of the USA. 830 3rd Ave., New York, N. Y. 10022.
Single copies free.

"USPTA...Professional Pride." U. S. Professional Tennis Association. 6701 Highway 58, Harrison, Tn. 37341.
Single copy free.

"Where the Action Is...A Career in Parks, Recreation, and Conservation." National Recreation and Parks Association. 1601 N. Kent St., Arlington, Va. 22209.
Single copy free.

"YWCA Interchange," and"The Challenge Today." National Board YWCA, 600 Lexington Ave., New York, N. Y. 10022.
Single copies free.

Local Resources

Tourism

Books, Pamphlets and Periodicals

"How to Start a Travel Agency," and "Travel Counseling and Agency Skills." American Society of Travel Agents. 360 Lexington Ave., New York, N. Y. 10017.

Write for information on correspondence course c/o Agency Development and Training Dept.

Audiovisuals

Free and Inexpensive

"Travel Counselors Attain Professional Status." Institute of Certified Travel Agents. P. O. Box 56. 148 Linden St., Wellesley, Ma. 02181.

Single copy free.

Local Resources

The Arts

Books, Pamphlets and Periodicals

Acting Professionally. Cohen, Robert S. National Press. 1972. $2.25.

American Music Conference. 150 E. Huron St., Chicago, Il. 60611.

Art Career Guide, Third Edition. Holden, Donald. Watson-Guptill Publications. 1973. $7.95.

Art Careers. Horton, Louise. Franklin Watts, Inc. 1975.

Artist's Market, '76. Polking, Kirk and Prince, Liz., eds. Writer's Digest. 1975.

Basic Drama Projects. Workbook. Clark Publishing Co. 1972.

Barnum & Bailey Circus Clown College. Box 1528, Venice Fl. 33595.

"Biography of Music Careers." American Symphony Orchestra League. Box 66, Vienna, Va. 22180.

"Careers in the Creative Arts." Career World. Vol. 4, No. 3. (November 1975): 8-19.

"Careers in Music." Music Educators' National Conference. 1902 Association Dr., Reston, Va. 22091.

Careers in the Theater. Babcock, Dennis. Lerner Publications Co. 1975.

"The Court Juggler." Career World. Vol. 5, No. 3. (November 1976): 20-21.

Dance, Careers for the 70's. Terry, Walter. Crowell-Collier. 1971.

The Directory of American College Theater. American Theater Association. 1317 F St., NW, Washington, D. C. 20004. $3.00.

Facing the Music. Temianka, Henri. David McKay Co., Inc. 1973. Tells about the concert performers and what happens on stage and backstage in the world of music.

Falling for Stars. 37808 Rudall Ave., Palmdale, Ca. 93550.

"Fine Arts and Humanities." Career World. Vol. 2, No. 4. (Mid-December 1973): 4-17.

"For Actors and Actresses." Career World. Vol. 3, No. 1. (September 1974): 18-19.

The Great Comedians. Wilde, Larry. Citadel Press. 1973. $3.95.

How Great Comedy Writers Create Laughter. Wilde, Larry. Nelson-Hall Co. 1976.

How You Can Appear in TV Commercials. Millkie, R. and Carlson, R. Pilot Books. 1973. $2.50 postpaid.

Jobs in Fine Arts and Humanities. Berger, Melvin. Wm. Morrow and Co.

Journal of Aesthetic Education. October 1973 issue. University of Illinois Press, Urbana, Il. 61801. $2.25
Contains a special article on careers.

Julie Harris Talks to Young Actors. Harris, Julie. Lothrop, Lee & Shepard. 1971.

The Moscow Circus School. Harris, Leon. Atheneum Publishers. 1970.

"Museum Studies." American Association of Museums. 2233 Wisconsin Ave., NW, Washington, D. C. 20007. $4.25 for a 30-page booklet.

Respect for Acting. Hagen, Uta and Frankel, Haskel. The Macmillan Co. 1973. $5.95.

So You Want to be a Magician? White, Laurence. Addison-Wesley Publishing Co.

Stuntmen's Association of Motion Pictures. 4810 Whitsett, North Hollywood, Ca. 91607.

The Summer Theatre Directory, 1976. Hoggard, Kevin and Deckel, Larry. American Theater Association. 1317 F St., NW, Washington, D. C. 20004.

The Theatre Student: Playwriting. Kline, Peter. Richards Rosen Press. 1970. $7.97.

Writer's Market '76. Koeter, Jane and Adkins, Rose, eds. Writer's Digest.

The Worker in Art. Shissler, Barbara. Lerner Publications Co. 1970.
Studies of working people by famous artists.

Audiovisuals

An Actor Works. Color film. Doubleday Multimedia. Customer Service Dept. Runs 20 min. Write for rental fee.

"Art Is..." Association Sterling Films. 1972.
Runs 28 min., in color.

Careers in Show Business. Sound filmstrip. Pathescope Educational Films, Inc.

Entertaining the Public. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

People Who Create Art. Guidance Associates.

Free and Inexpensive

"Art Career Opportunities." Catalyst.

"Careers in Art." National Art Education Association. 1201 16th St. NW, Washington, D. C. 20036. 25¢ for a 12-page pamphlet.

"Careers in Music." National Association of Schools of Music. Suite 650, One DuPont Circle, Washington, D. C. 20036.
Single copies free.

National Association of Schools of Art. Suite 650, One DuPont Circle, Washington, D. C. 20036.
Send for directory of art schools; single copies free.

"Your Career in Art." Philadelphia College of Art. Broad and Pine Sts. Philadelphia, Pa. 19102.

Local Resources

Food Service

Books, Pamphlets and Periodicals

American School Food Service Association. Box 10095, Denver Co. 80210.

Exploring Occupations in Food Service and Home Economics. Baker, Marilyn Carruth. Gregg Division. McGraw-Hill Book Co. 1976.

Food Service Executives Association. 2827 Rupp Dr., Ft. Wayne, In. 46805.

Your Future in Restaurants and Food Service. Westbrook, James. Arco Publishing Co. 1974.

Your Future in Food Technology Careers. Ammerman, Gale R. Richards Rosen Press, Inc. 1975. $5.10.

Audiovisuals

Careers in the Food Industry. Sound filmstrips. Butterick Publishing Co. 1976.

Careers in Food Service. Sound filmstrip. Pathescope Educational Films, Inc.

Cooks and Chefs. 8 mm. Silent film loop. Encyclopedia Britannica.

Job Opportunities in a Restaurant. Sound filmstrip. Society for Visual Education.

People Who Make Things. Guidance Associates.
A chef demonstrates his way of preparing fine food.

Preparing and Serving Food. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Waiters and Waitresses. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

American Culinary Federation. Educational Institute. Hyde Park, N. Y. 12538.
Provides apprenticeship training information for those interested in a career as a chef or cook.

"Careers in the Food and Nutrition Service," and "Administrative Careers Stop Hunger." U. S. Dept. of Agriculture. Food and Nutrition Service. Personnel Division. Washington, D. C. 20250.
Single copy free.

"Careers in Food Service," and "Careers in Food Service Guide for Students." National Institute for the Food Service Industry. 120 S. Riverside Plaza, Chicago, Il. 60606.
Single copies free.

Council on Hotel, Restaurant and Institutional Education. 1522 K St., NW, Washington, D. C. 20005.
An organization of hotel and food service educators. Write for free career information on cooks, chefs, waiters, and waitresses.

"Food Jobs." *Mademoiselle* Magazine. 50¢ for reprint #329.

Jackson's Tree. 16mm. Color film. General Mills, Inc. 9200 Film Center, Box 1113, Minneapolis, Mn. 55440.
Information on food industry careers. No rental charge.

National Restaurant Association. Director of Education. 1530 N. Lake Shore Dr., Chicago, Il. 60610.

U. S. and International Directory of Hotel and Restaurant Institutional Schools. Council on Hotel, Restaurant and Institutional Education. 1522 K St., NW, Suite 736, Washington, D. C. 20005. $1.00.

Local Resources

Hotel and Lodging

Books, Pamphlets and Periodicals

Careers in Hotel Management. McDonnell, Virginia. Julian Messner. 1971.

Hotel Sales Management Association. 358 5th Ave., New York, N. Y. 10001.

"Innkeeping and Restaurant Jobs." Career World. Vol. 2, No. 1. (Mid-September 1973): 4-13.

Audiovisuals

Free and Inexpensive

"Directory of Hotel and Restaurant Institutional Schools," "Scholarships in Hotel and Restaurant Schools," "Your Career in the Hotel-Motel Industry" and "1977 Educational Catalog." American Hotel and Motel Association. Educational Institute, Executive Director. Kellogg Center. East Lansing, Mi. 48823.

Offers educational programs in lodging and food service on a home study basis, and in many community colleges and adult education programs. Courses are offered in all aspects of the industry.

Single copies free.

"Futures in Executive Housekeeping." The National Executive Housekeepers Association. Business and Professional Bldg., Second Ave., Gallipolis, Oh. 45631.

Local Resources

Clothing Management, Production and Services Occupations

Art Career Guides: A Guidance Handbook for Art Students, Vocational Counselors and Job Hunters. Holden, Donald. Watson-Guptill Publications. 1973.

"Fashion Design." *Career World*. Vol. 5, No. 2. (October 1976): 16-17.

Inside the Fashion Business. Jarnow, Jeannette A. and Judelle, Beatrice. John Wiley and Sons. 1974. $12.95.

Audiovisuals

American Woman Series: Two Hundred Years of Authentic Fashion, and New Opportunities. Butterick Publishing Co.
Program I covers the years 1776-1876; the second program covers the years 1876 to the present.

Careers in Fashion and Textiles. Sound filmstrip. Pathescope Educational Films, Inc.

Careers in the Fashion Industry. Sound filmstrips. Butterick Publishing Co. 1976.

Clothing People in Style. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

A World of Work Series. Set 2. Filmstrip. McGraw-Hill Book Co. 1970.
Shows people at work and emphasizes their feelings when confronted with decisions. Occupations shown include a garment worker.

Free and Inexpensive

"Career Guidance in Illustration and Graphic Art." Society of Illustrators. 128 E. 63rd St., New York, N. Y. 10021.

"Careers in Art." National Art Education Association. 1916 Association Dr., Reston, Va. 22091. 25¢

"The Fashion Coordinator." *Career World*. Vol. 4, No. 5 (January 1976): 17.

"Fashion Designing" and "Fashion Design Schools." *Mademoiselle* Magazine. College and Careers Dept. 50¢ each for reprints.
The second title is not a list of schools, but a set of criteria for choosing a school.

"Sketching a Fashion Illustration Career." *Career World*. Vol. 3, No. 3. (November 1974): 20-21.

Institutional and Home Management Occupations

Books, Pamphlets and Periodicals

American Home Economics Association. 2010 Massachusetts Ave., NW, Washington, D. C. 20036.

"Executive Housekeeper." Career World. Vol. 3, No. 6. (February 1975): 18-19.

Jobs that Help the Consumer and Homemaker. Berger, Hilda. Wm. Morrow and Co.

National Council on Hotel and Restaurant Management. 1336 Wyatt Bldg., 777 14th St., NW, Washington, D. C. 20005.

Audiovisuals

Free and Inexpensive

"Building Maintenance Services." Small Business Reporter. Bank of America. Dept. 3120, Box 37000, San Francisco, Ca. 94137. $1.00.

"Futures Unlimited in Executive Housekeeping." National Executive Housekeepers Association, Inc. Business and Professional Bldg., 2nd Ave., Gallipolis, Oh. 45631.
Single copy free.

Local Resources

Home Furnishing, Equipment and Services Occupations

Books, Pamphlets and Periodicals

"Interior Designer Faces Wall-to-Wall Challenge." Career World. Vol. 2, No. 9. (Mid-May 1974): 16-17.

Your Career in Interior Design. Doyle, Robert V. Julian Messner.

Your Future in Interior Design. Greer, Michael. Career World Book Service. $1.95.

Audiovisuals

Careers in Housing, The Interior. Butterick Publishing.

Free and Inexpensive

American Institute of Interior Designers. 730 5th Ave., New York, N. Y. 10022.

"Student Career Guide." National Society of Interior Designers. 315 E. 62nd St., New York, N. Y. 10021.

Local Resources

Human Development Services Occupations

Child Care

Books, Pamphlets and Periodicals

Child Welfare League of America. 67 Irving Place, New York, N. Y. 10003.

Day Care Evans, Bell. Beacon Press. 1971.

"Day Care Aide." *Career World*. Vol. 3, No. 1. (September 1974): 22-23.

Day Care Aides: A Guide for In-Service Training. National Federation of Settlements and Neighborhood Centers. 232 Madison Ave., New York, N. Y. 10016. $2.75.

"Day Care Center Director." *Career World*. Vol. 1, No. 5. (Mid-January 1973): 15.

Exploring Careers in Child Care. Cincinnati Public Schools. Home Economics Department. McKnight Publishing Co. 1974.

"Serving Pre-School Children" Day Care and Child Development Council of America, Inc. 1012 14th St. NW, Suite 1104, Washington, D. C. 20005. Write for cost of booklet. A new broad-based child care career booklet is being written which will cover a variety of occupations in child care. Presently untitled; write for more information.

Audiovisuals

Babysitting: The Job--The Kids. Guidance Associates.

Careers in Child Care and Youth Guidance. Butterick Publishing Co. 1974.

Free and Inexpensive

"Day Care: What and Why." Metropolitan Life Insurance Company. Health and Welfare Division. Box CW, One Madison Ave., New York, N. Y. 10010.

Local Resources

Education

Books, Pamphlets and Periodicals

American Home Economics Association. 2010 Massachusetts Ave., NW, Washington, D. C. 20036.
Send for free publications list, and/or send $2.00 for Career Guidance Packet, a selection of materials on home economics careers.

"Anthropologist." Career World. Vol. 3, No. 9. (May 1975): 28-29.

Archaeological Institute of America. 260 W. Broadway, New York, N. Y. 10013.

"Careers--Home Ec Degree." Glamour Magazine. January 1974.
Check in your library.

Careers in Consumer Protection. McLeod, Sterling. Julian Messner. 1974.

"Careers in Home Economics." Career World. (Mid-November 1972): 4-8.

Challenging Careers in the Library World. Oakes, Vanya. Simon & Schuster. 1970.

"Children's Librarian: a Pro in Rumpelstiltskin Readings." Career World. Vol. 2, No. 2. (October 1973): 20.

The Council for Exceptional Children. 1920 Association Dr., Reston, Va. 22091.

Dept. of Education. AFL-CIO. 815 16th St., NW, Washington, D. C. 20006.

Division of Library Services. Office of Education, HEW, Washington, D. C. 20202.

"Home Economics." Career World. Vol. 5, No. 3. (November 1976): 6-17.

"Home Economics." Catalyst.
$2.25 for each booklet.

Home Economics Careers. Kupsinel, Penelope E. and Channels, Vera G. Interstate Printers and Publishers, Inc.

"Home Economics Careers Including Exciting Futures in Consumer Affairs." Career World. Vol. 3, No. 2. (October 1974): 6-16.

"Industrial Arts Teacher." Career World. Vol. 4, No. 9. (May 1976): 15.

"The Liberated Librarian." Career World. (February 7, 1972): 10.

National Center for Information on Careers in Education. 1607 New Hampshire Ave., NW, Washington, D. C. 20009.

Occupations in the Field of Library Science. U. S. Dept. of Labor. 1973. 200 Constitution Ave., NW, Washington, D. C. 20210.

Smart Shopping and Consumerism. Saunders, Rubie. Franklin Watts, Inc. 1973.

"Special Education Teacher." *Career World*. Vol. 2, No. 8. (Mid-April 1974): 16.

Special Libraries Association. 235 Park Ave., S., New York, N. Y. 10003.

Your Career in Teaching. Dowdell, Dorothy and Joseph. Julian Messner. 1975.

Your Future in Education. Milgram, Gail G. Richards Rosen Press, Inc. 1976. $4.80.

U. S. Dept. of Agriculture. Division of Home Economics. Washington, D. C. 20250.

Write for information on careers for home economists in research.

What's New in Home Economics. Dun-Donnelley Publishing Corp.

The library or home economics teacher may have copies of this periodical. Eight issues per year for $8.00.

Your Future as a Home Economist. Paris, Jeanne. Richards Rosen Press, Inc. $1.95 paperback.

Your Future in Archaeology. Larue, Gerald. Richards Rosen Press, Inc. 1970.

Your Future in Library Careers. Myers, Alpha and Temkin, Sara. Richards Rosen Press, Inc. 1973.

Audiovisuals

Careers in Consumer Affairs. Sound filmstrip. Butterick Publishing Co.

Careers in Education. Sound filmstrip. Pathescope Educational Films, Inc.

Caveat: Consumer Education in Action. Filmstrips, posters, overhead projectuals, observation and interview forms, games. J. B. Lippincott Co. 1975.

Consumer Education Series. 5 color filmstrips, 5 audio cassette tapes, 1 teacher's manual. Interpretive Education. 1973.

Educating the People. Sound filmstrip. Pathescope Educational Films, Inc.

American Home Economics Association. 2010 Massachusetts Ave., NW, Washington, D. C. 20036.

Occupations in the Field of Library Science. U. S. Dept. of Labor. 1973.

Smart Shopping and Consumerism. Saunders, Rubie. Franklin Watts, Inc. 1973.

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Consumer Education Series. 5 color filmstrips, 5 audio cassette tapes, 1 teacher's manual. Interpretive Education. 1973.

Educating the People. Sound filmstrip. Pathescope. 1976.

Free and Inexpensive

American Home Economics Association. 2010 Massachusetts Ave., NW, Washington, D. C. 20036.

"Anthropology and Jobs: A Guide for Undergraduates." American Anthropological Association. 1703 New Hampshire Ave., NW, Washington, D. C. 20009. $1.00.

Children's Services Division. American Library Association. 50 E. Huron St., Chicago, Il. 60611.

"Invitation to Teaching." Association for Childhood Education International. 3615 Wisconsin Ave., NW, Washington, D. C. 20016.
Single copy free.

"Library Technical Assistant." American Library Association. Office for Library Personnel Resources. 50 E. Huron, Chicago, Il. 60611.
Single copy free.

"Occupations in the Field of Library Science. U. S. Govt. Printing Office. Washington, D. C. 20402. 30¢.

"Rehabilitation and Home Economics." University of Nebraska--Lincoln. College of Home Economics. Lincoln, Ne. 68503. 25¢

"Teaching Art as a Career." National Art Education Association. 1916 Association Dr., Reston, Va. 22091.

"Typical First Positions of Recent Kansas State Home Economics Graduates with Bachelor's, Master's and Doctor's Degrees," and reprint of article, "New Dimensions in Home Economics Careers." Kansas State University. College of Home Economics. Justin Hall, Manhattan, Ks. 66506. 25¢.

"What is Anthropology?" and "On Becoming an Anthropologist." American Anthropological Association. 1703 New Hampshire Ave., NW, Washington, D. C. 20009.
First title is free, second is 25¢ each.

Local Resources:

Social Welfare

Books, Pamphlets and Periodicals

American Association of Marriage and Family Counselors. 225 Yale Ave., Claremont, Ca. 91711.

American Red Cross. Office of Personnel. 17th and E Sts., NW, Washington, D. C. 20006.

Career Center for Social Services. 225 Park Ave., S., New York, N. Y. 10003.

Career Opportunities: Community Service and Related Specialists. J. G. Ferguson Publishing. 1974.

Center for Human Services Research. Johns Hopkins Hospital. 601 N. Broadway, Baltimore, Md. 21205.

Community Services Administration. Social and Rehabilitation Service. U. S. Dept. of Health, Education and Welfare. Washington, D. C. 20201.

Exploring Careers Through Volunteerism. Lobb, Charlotte. Richards Rosen Press. 1976. $4.80.

Helping Others: A Guide to Selected Social Service Agencies and Occupations. Haimes, Norma, ed.

"Marriage Counseling." Career World. Vol. 4, No. 7. (March 1976): 19.

Minnesota Resource Center for Social Work Education. 731 21st Ave. S., Minneapolis, Mn. 55404.

National Association of Human Services Technologies. 1127 11th St., Sacramento, Ca. 94814.

National Conference on Social Welfare. 22 West Gay St., Columbus, Oh. 43215.

So You Want to Be a Social Worker. Perlman, Helen. Harper & Row Publishers.

"Social Workers Help Tap Human Resources." Career World. Vol. 2, No. 6. (Mid-February 1974): 18-19.

Think Tanks. Dickson, Paul. Atheneum Publishers. 1971.
Outlines the work of institutes throughout the U. S. employing research teams to investigate solutions to relevant social problems.

Unlocking Human Resources: A Career in Social Work. Soyka, Patricia W. Public Affairs Pamphlets. 1971. 35¢.

Your Future in Social Work. Fenton, Keyes. Richards Rosen Press, Inc. 1975. $4.80.

Audiovisuals

Careers and Lifestyles, Hubie Foster: Neighborhood Center Director. Sound filmstrip. Guidance Associates. 1974.

Careers in Social Work. Sound filmstrip. Pathescope Educational Films, Inc.

Helping People Solve Problems. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

People Who Help Others. Films and cassettes. Guidance Associates. 1972.

Free and Inexpensive

National Association of Social Workers. 1425 H St., NW, Suite 600, Washington, D. C. 20005.

Local Resources

Religion

Books, Pamphlets and Periodicals

Audiovisuals

Free and Inexpensive

"Catholic Church Related Careers." Catholic National Center for Church Vocations. 305 Michigan Ave., Detroit, Mi. 48226.

"Church Occupations and Voluntary Service." Board of Higher Education and Ministry. The United Methodist Church. Box 871, Nashville, Tn. 37202. 40¢.

Local Resources

See a local pastor, priest or rabbi for career pamphlets.

Protection Services Occupations

Law Enforcement, Protection and Correction

Books, Pamphlets and Periodicals

Boalt Hall Women's Association. School of Law. University of California. Berkeley, Ca. 94720.

"Call Yourself a Cop!" Career World. Vol. 3, No. 4. (December 1974): 22-23.

"Careers in Corrections." American Correctional Association. 4321 Hartwick Rd., Suite L 208, College Park, Md. 20740. 35¢ each copy.

Careers in the Legal Profession. Sarnoff, Paul. Julian Messner. 1970. $5.29.

International Association of Chiefs of Police. The Center for Law Enforcement Research Information and The Office of Information Service. 11 Firstfield Rd., Gaithersburg, Md. 20760.

A Job with a Future in Law Enforcement and Related Fields. Schreiber, Flora. Grossett & Dunlap Co. 1970.

"Law as a Career." American Bar Association. Standing Committee on Legal Assistants. 1155 E. 60th St., Chicago, Il. 60637. 40¢.

The Making of a Police Officer. Fenten, D. X. Westminster Press. 1973.

The Making of a Woman Cop. Abrecht, Mary Ellen. Wm. Morrow and Co. 1976. $8.95.

Manpower Development Assistance Division. LEAA. Washington, D. C. 20530.

Opportunities in Law Enforcement and Related Careers. Stinchcomb, James D. Vocational Guidance Manuals. 1976. $2.56 in paperback.

Police Foundation Publications. 1909 K St., NW, Suite 400, Washington, D. C. 20006.

Police: Skill and Science Combat Crime. Colby, C. B. Coward, McCann and Geoghegan, Inc. 1971.

"Shake Hands with a Politician." Career World. Vol. 3, No. 2. (October 1974): 20-21.

"So You Want to be a Legal Eagle." Career World. Vol. 3, No. 5. (January 1975): 18-19.

The Story of the Secret Service. Neal, Harry Edward. Grosset and Dunlap, Inc. 1971.

"What You May not Know About Careers in the CRIMINAL JUSTICE SYSTEM." Career World. Vol. 5, No. 1. (September 1976): 6-15.

Your Career in Law Enforcement. Liston, Robert A. Julian Messner. 1973. $5.29.

Your Future in Law Enforcement. Gammage, Allen Z. Richards Rosen Press, Inc. 1974. $1.95.

Audiovisuals

Careers in Law Enforcement. Sound filmstrips. Pathescope Educational Films, Inc.

Enforcing the Law. Sound filmstrip. Pathescope Educational Films, Inc.

People Who Work in Science: A Crime-Lab Technician. Sound filmstrip. Guidance Associates. 1972.

Policemen and Policewomen. 8 mm. Silent film loop. Encyclopedia Britannica.

Free and Inexpensive

"Can You Change This Man?" U. S. Civil Service Commission. Washington, D. C. 20415.

"Careers in Corrections," and "Marshaling Citizen Power to Modernize Corrections." The American Correctional Association. 4321 Hartwick Rd., L-208, College Park, Md. 20740.

"Careers in the Criminal Justice System." The National Council on Crime and Delinquency. Continental Plaza, 411 Hackensack Ave., Hackensack, N. J. 07601.

"Criminalistics." California Association of Criminalists. Box 22015, Sacramento, Ca. 95822.

Law Enforcement Assistance Administration. U. S. Dept. of Justice. Office of Regional Operations. Washington, D. C. 20530.

Describes grant and scholarship funds available to law enforcement students.

"Law Enforcement and Related Jobs with Federal Agencies," "Careers in Criminal Justice," "Police Officer," "Police Cadet," and "Federal Protective Officer." U. S. Civil Service Commission. Washington, D. C. 20415.

"Women in Policing." Police Foundation. Communications Dept. 1015 18th St. NW, Washington, D. C. 20036.

Single copy free to guidance counselors and career educators.

Local Resources

Fire Safety

Books, Pamphlets and Periodicals

"Firefighter--Puts the Damper on Disaster." Career World. Vol. 1, No. 5. (Mid-January 1973). 16.

International Fire Fighter. International Association of Fire Fighters. 905 16th St., NW, Washington, D. C. 20006.

International Association of Fire Chiefs, Inc. 1725 K St., NW, Suite 1112, Washington, D. C. 20006.

Audiovisuals

Careers and Lifestyles, Victor Perez: Fire Fighter. Sound filmstrips. Guidance Associates. 1974.

Firefighters. 8 mm. Silent film loop. Encyclopedia Britannica.

Local Resources

Environmental Safety

Books, Pamphlets and Periodicals

Atomic Energy Commission. Division of Environmental Protection. Washington, D. C. 20545.

Career Opportunities: Ecology, Conservation, and Environmental Control. J. G. Ferguson Publishing Co. $6.95.

Careers in Environmental Protection. Millard, Reed. Julian Messner. 1974.

Concern, Inc. 2233 Wisconsin Ave., NW, Washington, D. C. 20007.

Department of Health, Education and Welfare. Office of Education. Environmental Education Center. Washington, D. C. 20202.

Ecology, Conservation and Environmental Control. J. G. Ferguson Publishing Co. 1971.

Environmental Careers. Hahn, James and Lynn. Franklin Watts, Inc. 1976.

"Environmental Career: Wastewater Treatment Plant Operator." Career World. Vol. 3, No. 9. (May 1975): 20-21.

Environmental Protection Agency. Office of Public Affairs. Washington, D. C. 20460.

For Pollution Fighters Only. Hyde, Margaret O. McGraw-Hill Book Co. 1971.

Hammermill Paper Company. Erie, Pa. 16512.

Household Ecology. Percivall, Julia. Prentice-Hall, Inc. 1972.

How Do They Get Rid of It? Hilton, Suzanne. Westminster Press. 1970.

Jobs that Save our Environment. Berger, Melvin. Lothrop, Lee & Shepard Co. 1973.

1971 Report of the Council on Environmental Quality. U. S. Govt. Printing Office. Washington, D. C. 20401. $2.00.

Now or Never: The Fight Against Pollution. Halacy, D. C. Scholastic Book Services. 1971.

Opportunities in Environmental Careers. Fanning, Odom. Vocational Guidance Manuals. $5.75.

Our Polluted World: Can Man Survive? Perry, John. Franklin Watts, Inc. 1972.

Purity or Pollution: The Struggle for Water. Rondieu, Pierre. Franklin Watts, Inc. 1971.

"Shifting Sands of Time and Demand." *Career World*. Vol. 2, No. 3. (Mid-November 1973): 5-16.

"There is a Place for You in the Environmental Field." *Career World*. (February 7, 1972): 4-7.

Union Oil Co. Box 7600, Los Angeles, Ca. 90054.

United States Atomic Energy Commission. Technical Information. P. O. Box 62, Oak Ridge, Tn. 37830.

Water Pollution Control Federation. 3900 Wisconsin Ave., NW, Washington, D. C. 20016.

Audiovisuals

Ecology and the Study of Pollution. Transparency. Nirk, Brian A. Visual Materials, Inc. 1971.

Ecology: Can Man and Nature Coexist? Filmstrip. Schaap, Walter E. Current Affairs Films. 1970.

Preserving the Environment. Sound filmstrip. Pathescope Educational Films.

Surviving the Ecology Crisis. "The Polluted Planet." Sound filmstrips. Society for Visual Education.

Free and Inexpensive

"The Campaign for Cleaner Air." Public Affairs Pamphlets. 35¢.

"Careers in Air Pollution Control." Air Pollution Control Employment Bulletin Ability Search. Suite 202, Davis Bldg., 1629K St., NW, Washington, D. C. 20006.

"Careers in Water Pollution Control." Water Pollution Control Federation. 3900 Wisconsin Ave., NW, Washington, D. C. 20016.

"Toward a New Environmental Ethic," and "1971 Annual Report." U. S. Environmental Protection Agency. Washington, D. C. 20460.

"Working Toward a Better Environment--Career Choices." U. S. Environmental Protection Agency. Office of Education. Washington, D. C. 20460.

Local Resources

Transportation Services Occupations

Books, Pamphlets and Periodicals

Aim for a Job in the Trucking Industry. MacGill, John P. and Robinson, W. L. Richards Rosen Press, Inc. 1972. $4.80.

Air Line Dispatchers Association. 16219 142nd Ave., SW, Renton, Wa. 98055.

"Airline Flight Attendant: a High Flying Career." Career World. Vol. 2, No. 4. (Mid-December 1973): 22-23.

Airline Stewards and Stewardesses Association. Transport Workers' Union of America. 205 W. Wacker Dr., Chicago, Il. 60606.

"Air Transportation." Career World. Vol. 4, No. 4. (December 1975): 4-16.

American Trucking Associations. Educational Services. 1616 P St., NW, Washington, D. C. 20036.

Amtrak, Director of Personnel. 955 L'Enfant Plaza SW, Washington, D. C. 20024.

Send for information on railroad jobs with Amtrak.

"Career Newsletter." Flight Engineers International Association. 905 16th St. NW, Washington, D. C. 20006.

Enclose a long, stamped, self-addressed envelope with request.

Civil Air Patrol. USAF/OIP. Maxwell Air Force Base, Alabama. 36112.

Request information for specific occupation.

"Directory of Aerospace Education." $1.00. Journal of Aerospace Education. Magazine, $5.00 per year. National Aeronautics Association. Aerospace Education. 1725 De Sales St., NW, Washington, D. C. 20036.

Exploring Transportation Occupations. Walsh, Lawrence A. Gregg Division, McGraw-Hill Book Co. 1976.

Federal Aviation Administration. Public Inquiry Section. AHQ-406 Federal Aviation Administration, Washington, D. C. 20591.

Write for FAA approved schools offering training for work as an aircraft mechanic, pilot, or other technical fields related to aviation. Free career data sheets on various aviation occupations may be obtained also.

"How to Become an FAA Electronics Technician"(GA-300-117); "Airline Flight Attendant Career Guide" (GA-300-95); "Careers in the Aerospace Industry" (GA-300-116); "Aviation, Where Career Opportunities are Bright" (GA-20-23); "Transportation Occupations" (GA-300-100); "Professional Education and the Airport Manager" (GA-300-91); "1975--A Turning Point for the Airframe and Powerplant Mechanic". Dept. of Transportation. Federal Aviation Administration. Aviation Education Programs Division. 800 Independence Ave., SW, Washington, D. C. 20591.

International Organization of Masters, Mates and Pilots. 39 Broadway, New York, N. Y. 10006.

Jobs in Transportation. Gray, Genevieve. Lothrop, Lee & Shepard. 1973. $5.50.

Lansing Community College. Truck Driver Training Program Director. 419 N. Capitol Ave., Lansing, Mi. 48914.

"Moving On, Careers in Trucking." *Career World*. Vol. 3, No. 5. (January 1975): 8-15.

National Aeronautics and Space Administration. Washington, D. C. 20546.

National Marine Engineers' Beneficial Association. 17 Battery Pl., New York, N. Y. 10004.

National River Academy of the USA. P. O. Drawer 825, Helena, Ar. 72342. This school trains river pilots, engineers, operators and other personnel to work on inland waterways.

National Science Foundation. Washington, D. C. 20550.

The 1975-76 Airline Guide to Stewardess and Stewards Careers. Alexander, Clark Morton. Arco Publishing Co. 1975. $4.95.

The 1976-77 Official Airline Career Guide. Steward/Stewardess & Flight Service. 665 LaVilla Dr., Miami Springs, Fl. 33166. $5.95.

"Occupational Guide." Air Line Pilots' Association. 1625 Massachusetts Ave., NW, Washington, D. C. 20036.

Office of Maritime Manpower, Maritime Administration. U. S. Dept. of Commerce. Washington, D. C. 20230.
Send for general information about jobs in the merchant marine.

Ride the Ice Down. U. S. and Canadian Icebreakers in Arctic Seas. Shannon, Terry and Payzant, Charles. Golden Gate Junior Press. 1970.

Sea Careers: Jobs on the Waterways of the World. Fenten, D. X. J. P. Lippincott, Co. 1970.

"Ships Ahoy!" *Career World*. Vol. 3, No. 4. (December 1974): 19-21.

Stewardess and Flight Service Magazine. Box 188, Hialeah, Fl. 33010. $5.00 for a one-year subscription.

So You Want to be an Airline Stewardess. Saunders, Keith. Arco Books. 1973. $1.50.

Travel Careers. Peck, Ralph H. Franklin Watts, Inc. 1976.

U. S. Dept. of Transportation. Washington, D. C. 20590.

U. S. Merchant Marine Academy. Merchant Marine Academies in Maine, Massachusetts, California, New York, and Michigan.
Check your counselor's office or library for merchant marine academy bulletins.

"Your Airline Career." International Air Line Employees Association. 5600 S. Central Ave., Chicago, Il. 60638.
Enclose a long, stamped, self-addressed envelope.

Your Career in the World of Travel. Dowdell, Dorothy and Joseph. Julian Messner. 1971.

Your Future in Railroading. Goodfellow, Thomas M. Richards Rosen Press, Inc. 1970. $4.80.

Audiovisuals

Air Cargo, Transportation, and Trade Series. Photographs. Behrens, June. Children's Press. 1970.

The Airline Cabin Attendant. Sound filmstrip. Society for Visual Education.

Airport Service. Filmstrip. Valiant, Inc. 1972.

America's Urban Crisis. "The Transportation Crisis." Sound filmstrip. Society for Visual Education.

"Careers in Transportation." 16mm. film. APGA Films. 1607 New Hampshire Ave., NW, Washington, D. C. 20009.
Runs for 30 min.; rents for $20.00 per day.

Careers in Transportation. Sound filmstrip. Pathescope Educational Films.

Careers in Transportation and Communication Services. Cassettes. Educational Research, Inc.

Classroom Journeys. "Airport". Sound Filmstrip. Troll Associates. 1972.

Local Transit Bus Drivers. 8mm. Silent film loop. Encyclopedia Britannica.

Local Truckdrivers. 8mm. Silent film loop. Encyclopedia Britannica.

The Long Haul Truck Driver. Color Filmstrip. Society for Visual Education.
Runs 17 min.; may be purchased with record for $12.00, with cassette for $14.00.

Moving People and Goods. Sound filmstrip. Pathescope Educational Films.

Over-the-Road Truck Drivers. 8mm. Silent film loop. Encyclopedia Britannica.

Stewardesses. 8mm. Silent film loop. Encyclopedia Britannica.

Work People Do. "People We Meet When We Travel." Filmstrip. Popular Science Audiovisuals. 1970.

Free and Inexpensive

"Big Load Afloat." The American Waterways Operators, Inc. 1600 Wilson Blvd., Suite 1101, Arlington, Va. 22209.
Describes barge and towing industry. Single copy free.

"Careers in Aerospace." American Institute of Aeronautics and Astronautics. 1290 Avenue of the Americas, New York, N. Y. 10019.
Single copy free.

"Careers in Trucking Companies," "Scholarship Programs of Motor Carrier Companies and Associations," "The Directory of Transportation Education in U. S. Colleges and Universities," and "What to Look for in a Truck Driving School." American Trucking Associations, Inc. Educational Services. 1616 P St., NW, Washington, D. C. 20036.
Single copies free.

"Directory of Aviation and Transportation Majors and Curricula Offered by Colleges and Universities" (GA-300-72); and "Lists of Certificated Pilot Flight and Ground Schools" (AC-1421). Federal Aviation Administration. Office of Information Services. Public Information Center. AIS-230, 800 Independence Ave., SW, Washington, D. C. 20591.
Single copies free.

"Directory of Transportation Education." U. S. Dept. of Transportation. Office of Public Affairs. S-80, 400 7th St., SW, Washington, D. C. 20590.
Single copy free.

"Get on the Ladder for Your Lake Shipping Career." Lake Carriers' Association. 1411 Rockefeller Bldg., Cleveland, Oh. 44113.
Single copy free.

"Get On to Something Great." National Association of Motor Bus Owners. 1025 Connecticut Ave., NW, Washington, D. C. 20036.
Single copy free.

"The Human Side of Railroading." Association of American Railroads. American Railroad Bldg., 1920 L St., NW, Washington, D. C. 20036.

Harry Lundeberg School of Seamanship. Piney Point, Md. 20674.

"The Job of a Greyhound Driver." Greyhound Lines, Inc. Greyhound Tower. Phoenix, Az. 85077.
Single copy free.

"Particulars Regarding Seafaring Employment." Office of Maritime Manpower. Maritime Administration. U. S. Dept. of Commerce. Washington, D. C. 20230.

"The People of the Airlines," and "Career Opportunities in Aviation." Air Transport Association of America. 1709 New York Ave., NW, Washington, D. C. 20006. 50¢.

Government Services Occupations

Books, Pamphlets and Periodicals

"Action Course in Practical Politics." Public Affairs Dept. Chamber of Commerce of the U. S. 1615 H St., NW, Washington, D. C. 20006.
Write for details about this set of booklets, worksheets and discussion leader's manual.

"Career Opportunities: The Challenge of Meteorology." American Meteorological Society. 45 Beacon St., Boston, Ma. 02108.
Also request list of colleges and universities with degree programs in the atmospheric sciences. Single copies free.

"Careers for Meteorologists," "National Oceanic and Atmospheric Administration," "Suggested Courses for Meteorologist Positions," "NOAA," "Colleges and Universities for Training in Meteorology." National Oceanic and Atmospheric Administration. U. S. Dept. of Commerce. Washington, D. C. 20230.

Careers for Women in Uniform. Heinman Jr., Grover and Myers, Virginia Heinman. J. B. Lippincott Co. 1971.

Careers in Elective Government. Doyle, Robert V. Julian Messner. 1976. $6.65.

Careers in Urban Affairs. Asbell, Bernard. Peter Wyden, Inc. 1970.

Central Intelligence Agency. Office of Personnel. P. O. Box 1925, Washington, D. C. 20013.

"Choose a Career with Zip...Postal Clerk." Career World. Vol. 3, No. 1. (September 1974): 20-21.

"Customs Inspector." Career World. (Mid-November 1972): 15.

Democratic National Committee. 1625 Massachusetts Ave., NW, Washington, D. C. 20036.

Department of State. Foreign Service Employment Division. Washington, D. C. 20520.

"Employment of the Handicapped in Federal Service," (BRE-8); "Accent on Youth," (BRE-19); "Employment of the Deaf in Federal Service," (BRE-22); "Employment of the Blind in Federal Service," (BRE-23); "In Public Practice--Lawyers," (BRE-69); "Take a Giant Step--Typists, Stenographers, and Office Jobs," (BRE-58); "Trabajando Para los USA," (BRE-44), Spanish-English version of "Working in the USA." U. S. Civil Service Commission. Washington, D. C. 20415.

Federal Bureau of Investigation. Department of Justice. Washington, D. C. 20535.

"Foreign Languages and Careers." Modern Language Association. 62 5th Ave., New York, N. Y. 10011. 1974. 75¢.

"A Guide for Job Candidates." Modern Language Association. Job Information Dept. 62 5th Ave., New York, N. Y. 10011. 75¢.

"Is There a Foreign Language Career in Your Future?" Career World. Vol. 3, No. 3. (November 1974): 18-19.

League of Women Voters. 1730 M St., NW, Washington, D. C. 20036.

"The Modern Meteorologist Sometimes Fools Mother Nature." Career World. Vol. 4, No. 1. (September 1975): 20-21.

National Security Agency. Fort Meade, Md. 20755.

On the Campaign Trail. Beech, Linda. Julian Messner. 1971.

Opportunities in Foreign Language Careers. Huebener, Theodore. Vocational Guidance Manuals. $2.95.

Opportunities in Meteorology. Harris, Miles F. Vocational Guidance Manuals. 1972. $5.50.

Republican National Committee. 310 1st St., SE, Washington, D. C. 20003.

U. S. Bureau of Customs. Employment Programs Branch. Washington, D. C. 20226.

U. S. Dept. of State. Language Services Division. Washington, D. C. 20520.

United States Postal Service. Contact your local Post Office for information.

"Working for Uncle Sam." Career World. Vol. 4, No. 6. (February 1976): 4-14.

Your Future in the Military Services. MacCloskey, Monro, Brig. Gen. USAF (ret.). Richards Rosen Press, Inc. 1974. $4.80.

Audiovisuals

Career Training Through the Armed Forces. Sound filmstrips. Pathescope Educational Films, Inc. 1974.

Careers in Community Service. Sound filmstrip. Pathescope Educational Films.

Careers in Government Service. Sound filmstrip. Pathescope Educational Films.

Careers with Government. Posters. J. Weston Walch, Publisher.

Mail Carriers. 8mm. Silent film loop. Encyclopedia Britannica.

Our Armed Forces. Filmstrips. Educational Projections Corp. 1972.

Postal Clerks. 8mm. Silent film loop. Encyclopedia Britannica.

Protecting our Nation. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Serving the Nation. Sound filmstrip. Pathescope Educational Films, Inc.

Free and Inexpensive

American Translators Association. Box 129, Croton-on-Hudson, N. Y. 10520.

"Certificate Programs in Translating and Interpreting." Dept. of Translation and Interpretation. Monterey Institute of Foreign Studies. Box 1978, Monterey, Ca. 93940.

"Civil Engineering." Engineers' Council for Professional Development. 345 E. 47th St., New York, N. Y. 10017.

"The Federal Government as an Employer of the Unskilled and Undereducated." "Working for the USA." U. S. Civil Service Commission. Bureau of Recruiting and Examining. Washington, D. C. 20415.

"The International Developer: Economist," "Employment Fact Sheet," "Opportunities Overseas: International Development Intern Program." Agency for International Development (AID). Office of Personnel and Manpower. Professional Recruitment. Rm. 419, State Annex 14, Washington, D. C. 20523.

The last title describes a two-year on-job career program for students who have received bachelor's degrees. Single copies free.

"Is Civil Engineering for You?" American Society of Civil Engineering. 345 E. 47th St., New York, N. Y. 10017.

Single copy free.

"The Pre-Law Handbook, 1974-75." "Preparing for Law School." Association of American Law Schools. 1 DuPont Circle, NW, Washington, D. C. 20036.

First title is $3.00 per copy; second title single copies free.

School of Languages and Linguistics. Division of Interpretation and Translation. Georgetown University. Washington, D. C. 20007.

United Nations. Interpreting and Translating Services Office. New York, N. Y. 10017.

U. S. Department of Labor. Federal Bureau of Apprenticeship and Training.

Check for free information in one of the 160 field offices in cities throughout the nation, or Washington, D. C. 20210.

Local Resources

Personal Services Occupations

Books, Pamphlets and Periodicals

American Electrolysis Association. 622 Evergreen Parkway, Union, N. J. 07083.

Cosmetic Career Women, Inc. 614 W. 51st St., New York, N. Y. 10019.
Write with specific questions on careers in cosmetic marketing.

"Cosmetics Marketer." *Career World*. Vol. 4, No. 2. (October 1975): 24-25.

Cosmetology Accrediting Commission. 1601 18th St., NW, Washington, D. C. 20009.

"Electrologist." *Career World*. Vol. 1, No. 5 (Mid-January 1973): 17.

"Get Set for a Career as a Cosmetologist." *Career World*. Vol. 2, No. 8. (Mid-April 1974): 20-21.

Lesson Plans for Cosmetology Career Awareness. Milady Publishing Corp.
Includes spirit masters.

Milady State Board Cosmetology Guide. Cimaglia, Alice R. Milady Publishing Corp. 1975. $11.50.

Successful Cosmetic Selling. Degenshein, J. and Stern, N. Chain Store Publishing Corp. $6.50 postpaid.

Your Future in the Beauty Business. Leavathes, Christine. Richards Rosen Press, Inc.

Your Future in Beauty Culture. Gelb, Lawrence M. Arco Publishing Co., Inc. 1970. $1.95 paperback.

Audiovisuals

Careers in Beauty and Fitness. Sound filmstrip. Pathescope Educational Films, Inc. 1974.

Cosmetologists. 8 mm. Silent film loop. Encyclopedia Britannica.

Helping People Look Their Best. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Free and Inexpensive

"Beauty Culture." National Beauty Culturists League. 25 Logan Circle, NW, Washington, D. C. 20005.
Send stamped, self-addressed with request.

"A Career in Barbering." Barbers, Beauticians, and Allied Industries International Association. 4755 Kingsway Dr., Indianapolis, Ind. 46205.

"Careers in Cosmetology," and "Successful Careers in Beauty Culture." National Association of Cosmetology Schools. 599 S. Livingston Ave., Livingston, N. J. 07039.

Also request list of licensed member schools in your state.

"The Electrolysis Society of America." Electrolysis Society of America, Inc. 701 7th Ave., New York, N. Y.

"Hairdressing and Cosmetology...A Glance Back...A Focus on the Present" and "For the Love of Hair." National Beauty Career Center. 3839 White Plains Rd., Bronx, N. Y. 10467.

Single copies free.

"A Profitable Career in Barbering and Men's Hairstyling Awaits You." National Career Center. 3839 White Plains Rd., Bronx, N. Y. 10467.

Single copy free.

Local Resources

7
CAREER GUIDANCE

Books and Periodicals

The American Woman: Her Changing Social, Economic and Political Roles. Chafe, William. Oxford University Press. 1972.

Annual Guides to Undergraduate and Graduate Study. Heginer, Karen Collier, ed. Peterson's Guides, Inc.

Career Choice and Career Preparation. Schill, William J. and Nichols, Harold E. Interstate Printers and Publishers, Inc. 1970.

A programmed guide for students.

Career Choices for the '70's. Arnold, Arnold. Crowell-Collier Press. 1971.

"Career Clubs." Career World. Vol. 2, No. 3. (Mid-November 1973): 2-3.

Career Guidance and the Kuder Interest Inventories. Science Research Associates. 1973.

Suggests uses for the Kuder Surveys; includes a 29-page listing of occupations keyed to the ten Kuder interest areas. Each occupation is keyed to information in the Occupational Exploration and Career Information kits, the DOT and the Occupational Outlook Handbook.

"Changing Opportunities for Women." Career World. Vol. 3, No. 2. (October 1974): 2-5.

"Chart Your Career Course." Career World. Vol. 3, No. 8. (April 1975): 22-36.

Creating the Future: A Guide to Living and Working for Social Change. Beitz, Charles and Washburn, Michael. Bantam Books, Inc. 1974.

A handbook for those interested in social movements, either as volunteers or staff members. Includes job requirements, kinds of jobs available, how to look for work, and lists key organizations in such fields as media, education, law, health, politics, minorities, the environment, and women. 1-4 copies $1.95 each, 5 copies and over $1.60 each.

Discovering You. Healy, Charles C. Gregg Division, McGraw-Hill Book Co. 1976.

"English and Your Career, 'Mend your speech a little, lest it mar your fortune.'" Career World. Vol. 1, No. 5. (Mid-January 1973): 2-3.

Everything a Woman Needs to Know to Get Paid What She's Worth. Bird, Caroline. David McKay Co., Inc. 1973.

"Facing Facts About Preparing for Your Future." U. S. Dept. of Labor. Manpower Administration. Washington, D. C. 20210.

Girls Are Equal Too: The Women's Movement for Teenagers. Carlson, Dale. Atheneum Publishers. 1973.

Going to College Handbook. Edited by Outlook Publishers.

"Good Luck Careers." Career World. Vol. 2, No. 1. (Mid-September 1973): 2-3.

Guide to Alternative Colleges and Universities. Blaze and others. Beacon Press. 1974.

How to Decide: A Guide for Women. Scholz, Nelle Tumlin,; Prince, Judith Sosebee, and Miller, Gordon Porter. College Entrance Examination Board. Princeton, N. J. 08540.

I Am. Lisker, Sonia. Hastings House. 1973.
Pictures a girl in various career roles.

I Can Be Anything: Careers and Colleges for Young Women. Mitchell, Joyce Slayton. College Entrance Examination Board. Princeton, N. J. 08540.
1-4 copies $7.95 each. 5 copies and over $7.15 each.

"The Important You, Tomorrow's Best Careers." Career World. (December 1974): 2-3.

The Joy of Work. Keefe, John and Stein, Stanley. Richards Rosen Press, Inc. 1974. $4.80.

Little Miss Muffet Fights Back. Feminist Book Mart. Feminists on Children's Media. 1974.
A bibliography containing approximately 300 critical reviews of children's books, plus information on how to order books, how to get children's books published, how to work for change in children's book-publishing.

My Educational Plans. Science Research Associates. 1970.
Fifteen self-appraisal inventories help student plan a high school program.

Nontraditional Careers for Women Splaver, Sarah. Julian Messner. 1973.

Nontraditional College Routes to Careers. Splaver, Sarah. Julian Messner. 1975.

Occupational Guidance. Finney Co. 1973.
Career-oriented series of monographs directed to average and above-average high school students.

Reflections on Your Career: A Career Girl's Guide to Grooming and Dress. Interstate Printers and Publishers, Inc. 1975.

The Right College. Pope, Loren. Macmillan Publishing Co., Inc. 1970.
How to get in, stay in, or get back into college.

Saturday's Child. Seed, Suzanne. J. Philip O'Hara, Inc. 1973.
Women who have successfully pursued careers in a wide variety of fields talk about how they chose their jobs, what education was needed and how their work affects family life.

"Should You Choose a Private Vocational School?" Career World. (Mid-November 1972): 2.

Solving Your Career Mystery. Karlin, Muriel S. Richards Rosen Press, Inc. 1975. $4.80.

"Study Programs Beyond the High School Level." Career World. Vol. 3, No. 8. (April 1975): 46-47.

Survival in the World of Work. Halac[illegible]r., D.S. Charles Scribner's Sons. 1975.
An overview of the economic and psychological aspects of work. 1-4 copies $5.95 each, 5 copies and over $5.35 each.

Turn Yourself on Goal Planning for Success. Linneman, Robert E., Ph.D. Richards Rosen Press. 1970. $4.80.

What Can I Do with a Major In...? Mainig, Lawrence, and Morrow, Sandra L. Saint Peter's College Press. 1976.

"What Is This Lifestyle Stuff?" Career World. Vol. 3, No. 5. (January 1975): 2-3.

What to Do After High School. Science Research Associates. 1971.

The Working Mother. Callahan, Sidney. Macmillan Publishing Co., Inc. 1971.

The Young Woman's Guide to an Academic Career. Farnsworth, Marjorie. Richards Rosen Press, Inc.

Your Aptitudes: You Do Best What You Are Best Fitted To Do. Barth, George Francis. Wm. Morrow and Co.

Your Career If You're Not Going to College. Splaver, Sarah. Julian Messner. 1971.

Your Future as a Husband. Schimel, John L., M. D. Richards Rosen Press, Inc. 1971. $4.80.

Your Future as a Wife. Schimel, John L., M. D. Richards Rosen Press, Inc. 1970. $4.80

Your Future as a Working Woman. Stevenson, Gloria B. Richards Rosen Press, Inc. $4.80.

Your Future in a Changing World. Brunetti, Cledo. Richards Rosen Press, Inc. 1971.

Becoming: A Course in Human Relations. J. B. Lippincott. 1974.
Three self-contained modules: Relating, Interaction and Individuality. Includes a personal log, a leader's guide and a kit containing audio cassettes, games, puzzles, photo cards and other manipulates.

Career Education Wall Charts. McDaniels, Carl, ed. Virginia Polytechnic Institute and State University. Garrett Park Press.
A series of 17x22 wall charts showing a wide range of career education information and concepts, such as: requirements, earnings, employment outlook, apprenticeship, summer jobs, leisure activities, and job searching activities.

Career Insights and Self Awareness Games. Muson, Harold. Houghton Mifflin.
A game which promotes self-exploration, self-awareness and self-assessment.

Career Lab: A Career Exploration Program. Sourifman, Vivian. Westinghouse Learning Corporation. 1975. $89.50.
Utilizes different learning modes as "hands-on" work experience, individualized instruction, peer group interaction and self-awareness exercises.

Career Opportunities I. Filmstrip Popular Science Audiovisuals. 1970.
"New Career Opportunities," "Your Life of Work," "Interests Pay Off," "Career Planning in a Changing World," and "How to Study Occupations."

Career Values: What Really Matters to You? Guidance Associates.
Part I. Introduction. Part II. Chance-Taking. Part III. Work Environment. Part IV. Personal Commitment. Part V. Time.

Curriculum Careering. Gamebook and Guidebook. Chronicle Guidance Publications. 1974.

Discovery. Color filmstrip. Scholastic Book Services.
"Thinking About Personalities," "Thinking About Work," "Why People Work," "Thinking About Goals," "Looking at Career Fields," "On the Road and in the Plant," "Other Career Fields" and "More Career Fields." Thirty career logbooks and a 144-page teaching guide.

Entering the Working World. Four color sound filmstrips. Butterick Publishing Co.
Helps students make the transition from a student to an independent adult in gainful employment.

Exploring Careers: Classroom Materials Package. ABT Publications.
Involves students, as indivisuals, small groups, or whole class, in values-oriented research and analysis activities. Spirit masters and student worksheets are included. Topics include a look at sex

bias in jobs, ramifications of a handicap, independent living, hobbies and careers, looking at goals, personal styles and interpersonal skills.

Foundations for Occupational Planning. Captioned filmstrips. Society for Visual Education.
"Who Are You?" "What Do You Like to Do?" "What Is a Job?" "What Are Job Families?" "What Good Is School?"

High School Course Selection and Your Career. Odgers, Dr. John G. and Winefordner, David W. Guidance Associates.

Homes and Lifestyles: The Choice Is Yours. Sound filmstrip. Guidance Associates. 1976.
A five-part resource for family living and home management.

Jobs and Gender. Guidance Associates.

Keys--Career Exploration. Color filmstrips with accompanying cassettes. Science Research Associates.
Is related to the interest areas measured by the Kuder E Interest Inventory.

Life Career. Game. Bobbs-Merrill Co., Inc.
Helps understand rewards and responsibilities in labor, education and marriage. Gives experience in planning for the future.

Livelyhoods. Sixteen filmstrips and cassettes. Houghton Mifflin Co. 1974.

Making the Most of Your Talents. Sound filmstrips. Guidance Associates. 1976.

New Horizons for Women. Sound filmstrip. Pathescope Educational Films, Inc. 1976.

Non-Traditional Careers for Women. Sound filmstrips. Pathescope Educational Films, Inc. 1974.

Opportunity. Sound filmstrips. Scholastic Book Services. 1976.
On-the-job interviews, information about dealing with others and self, and student's personal assessment of values and interests.

Posters. J. Weston Walch, Publisher.
Photos and commentaries on careers for speakers, writers, artists, musicians, athletes, persons in home economics, women in business, women in athletics, getting a job, getting along with others, keeping a job, living with oneself, secretarial and stenographic careers.

Values-Making Choices. Filmstrips. BFA Educational Media. 1975.

Why Work at All? Guidance Associates.

8

DIFFERENT SKILLS FOR DIFFERENT TASKS

Books and Periodicals

All About Jobs. Tyson, Kenneth. Mafex Associates, Inc. 1974.

Accent/Jobs and Job Models. Clarion House. Follett Publishing Co. 1975.
Special Education. Reading levels 5-6.

Accent/World of Work. Dare, Beatrice and Wolfe, E. Follett Publishing Co. 1975.
Special Education. Reading levels 3-4. Social skills related to the work world.

"Advanced Placement." Career World. Vol. 4, No. 4. (December 1975): 2-3.

Basic Skills on the Job. Young, Eleanor R. CEBCO. $7.95.

Directory of Overseas Summer Jobs. National Directory Service. 1976.

Finding Your Job. Finney Co. 1974.
Provides job information for slow learners; underachievers, and students in special classes. Includes information on 360 jobs.

Getting the Right Job. Morrison, Phyllis. McGraw-Hill Book Co. 1970.

"Here's What It Takes to Get the Job Done." Career World. Vol. 5, No. 3. (November 1976): 4-5.

How Teenagers Can Get Good Jobs. Gelinas, Robert P. and Gelinas, Paul J. Richards Rosen Press, Inc. 1971. $4.80.

"How to Fill Out Job Application Forms." Career World. Vol. 4, No. 6. (February 1976): 30-31.

How to Get Into College and Stay There. Science Research Associates. 1970.

Jobs and Careers--Inquiry-Oriented Mini-Units. Changing Times Education. 1974.

Job Guide for Young Workers. U. S. Dept. of Labor. 1969-70. Washington, D. C. 20210.

"The Job Interview." Career World. Vol. 1, No. 9. (Mid-May 1973): 2-3.

"Jobs for Which a High School Education is Generally Required." Bureau of Labor Statistics. U. S. Dept. of Labor. 300 S. Wacker Dr., Chicago, Il. 60606.

My Job Application File. Kahn, Charles; Tong, Robert, and Jew, Wing. Janus Book Publishers. 1975.

My Job Interview Guide. Livingstone, Arnold. Janus Book Publishers. 1975.

Merchandising Your Job Talents. U . S. Dept. of Labor. Washington, D. C. 20210. 1971.

"New Ways of Going to College." *Career World*. Vol. 4, No. 3. (November 1975): 2-3.

On-Job Training and Where to Get It. Liston, R. A. Simon & Schuster, Inc. 1973. $4.79.

On the Job. Norton, Joseph. Doubleday & Co. 1970.

"Summer Jobs, Last-Minute Student Work Ideas." *Career World*. Vol. 1, No. 9. (Mid-May 1973): 22-23.

"Summer Jobs Sampler." *Career World*. Vol. 3, No. 5. (January 1975): 21-25.

Teenage Jobs. Lembeck, Ruth. David McKay, Inc. 1971.

The Teenager and the Interview. Keefe, John. Richards Rosen Press, Inc. 1971.

The World of Work. Koschnick, Kay. New Readers Press. Reading level 4-5.

"Write an Outstanding Resume." *Career World*. Vol. 2, No. 7. (Mid-March 1974): 26-30.

Your Career in the World of Work. Berlye, Milton. Bobbs-Merrill Co. 1975.

"Youth and the Wage Hour Law." *Career World*. Vol. 3, No. 8. (April 1975): 48-50.

Audiovisuals

Achieving Success in the World of Jobs. Sound filmstrips. Society for Visual Education.

Finding Your Job. Filmstrips and cassettes. Eye Gate House, Inc. 1972. "Getting a Better Job," "Finding Your Career," "Job Shopping," "The Job Interview," "Working for Someone Else" and "What Can You Do?"

Job Finding I. Filmstrip. Popular Science Audiovisuals. 1970.
"So You Want a Summer Job," "How to Get a Job and Keep It," and "How to Find a Job for Yourself."

Job Opportunities Now--Group I. Sound filmstrips. Society for Visual Education.
"Requirements in the World of Jobs," "Achieving Success in the World of Jobs." Also filmstrips on job opportunities in a restaurant, a hospital, a department store, and a supermarket. Each runs about 14 min.

New Knowledge Needed to Obtain Work. Science Research Associates. 1973.
Sixty-four transparencies and accompanying test.

Payday Game. Parker Brothers, Inc. 1975.

Requirements in the World of Jobs. Sound filmstrips. Society for Visual Education.

Steady Job Game. Sanzone, Jean. Mafex Associates, Inc. 1971

You and Your Job Series. Rath, Patricia Mink; Mason, Ralph E. and Phipps, Lloyd J. Interstate Printing and Publishing, Inc. 1970.

9

PROFESSIONAL RESOURCES

Books and Periodicals

Art Career Guides: A Guidance Handbook for Art Students, Teachers, Vocational Counselors and Job Hunters. Holden, Donald. Watson - Guptill Publications. 1973.

Career Development Activities. Kenneke, Larry. Howard W. Sams. 1973.

Career Education and the Counselor. Pietrofesa, John J.; Leonard, George E.; and Giroux, Roy F. A Reprint Series Six. American Personnel and Guidance Association. 1975.

Career Education for Gifted and Talented Students. Hoyt, Kenneth B. and Hebeler, Jean R. Olympus Publishing Co. 1974.

Career Education in the Academic Classroom. Mangum, Garth,; Becker, James W.; Coombs, Garn; and Marshall, Pat. Olympus Publishing Company. 1975.

Career Education in the Middle/Junior High School. Evans, Rupert,; Hoyt, Kenneth; and Mangum, Garth. Olympus Publishing Co. 1973.

Career Education: New Approaches to Human Development. Bailey, Larry J.; and Stadt, Ronald. McKnight Publishing Co. 1973.

Career Education: The New Frontier. Ressler, Ralph. Charles A. Jones Publishing. 1973.

Career Education Resource Guide. Bottoms, James E. et. al., eds. General Learning Corporation. 1972.

Career Education Survival Manual. McClure, Larry. Olympus Publishing Co. 1975.

Career Education: The New Frontier. Ressler, Ralph. Charles A. Jones Publishing Co. 1973.

Career Education: What It Is and How To Do It. Hoyt, Kenneth: Evans, Rupert; Mackin, Edward; and Mangum, Garth. Olympus Publishing Co. 1972.

Career Exploration and Planning. Shertzer, Bruce E. Houghton Mifflin Co. 1976.

Career Guidance, Practices and Perspectives. Gysbers, Norman; Drier, Harry N. Jr.; and Moore, Earl J. Charles A. Jones Publishing Co. 1973.

Career Guidance: Who Needs It, Who Provides It, Who Can Improve It? Ginsberg, Eli. McGraw-Hill Book Co. 1971.

Careers in the Earth Sciences. Millard, Reed. Julian Messner. 1974.

Counseling for Career Development. Tolbert, E. L. Houghton Mifflin Co. 1974.

The Courage to Change: New Directions for Career Education. Pucinski, Roman C.; and Hirsh, Sharlene Pearlman, eds. Prentice Hall, Inc. 1971.

A Curriculum Model for Facilitating Career Development. Bailey, Larry J. Faculty of Technical and Industrial Education. Southern Illinois University. 1971.

Developmental Tasks and Education. Havighurst, Robert J. David McKay Company, Inc. 1972.

Educators Guide to Free Films. *Educators Guide to Free Filmstrips*. *Educators Guide to Free Guidance Materials*. Educators Progress Service, Inc. 1974.

English on the Job. Carlin, Jerome; Christ, Henry; Holder, Glenn; and Ellsworth, John. Globe Book Co. 1970.

Enrichment of Teacher and Counselor Competencies in Career Education: K-6 Final Report. Peterson, Marla et al. Eastern Illinois University. 1974.

Guidance Monograph Series Set IX. *Career Education and the Curriculum*. Stone, Shelley C.; and Shertzer, Bruce eds. Houghton Mifflin Co. 1976.

The series includes "Career Counseling for Teachers and Counselors," and "Career Education and Foreign Languages," "...and Business Education," "...Social Studies," "...Biological Sciences," "...Industrial Education," "...English," "...Mathematics," "...Home Economics," "...Physical Sciences."

An Introduction to Career Education. Stevenson, John B. Charles A. Jones Publishing Co. 1973.

Life Coping Skills for Eleven-to-Thirteen-Year-Olds. Agency for Instructional Television. Box A. Bloomington, Ind. 47401.

New Careers for Teachers. McKee, Bill. Henry Regnery Co. 1972.

Opportunities in Meteorology. Harris, Miles. Vocational Guidance Manuals. 1972.

The Teacher's Role in Career Development. Tennyson, Wesley; Soldahl, Thomas A.; and Muller, Charlotte. National Vocational Guidance Association. 1970.

Work is Here to Stay Alas. Leviton, Sar A.; and Johnston, William B. Olympus Publishing Co. 1973.

Yellow Pages of Learning Resources. Wurman, Richard Saul, ed. Massachusetts Institute of Technology. 1972.

Audiovisuals and Kits

Algebra in Occupations. Posters. J. Weston Walch , Publisher.

Arithmetic in Occupations. Posters. J. Weston Walch, Publisher.

Career Opportunities Boxes. Houghton Mifflin Co. 1975.
Program consists of five boxes of job information associated with five major disciplines--social studies, mathematics, English, science and foreign language.

Geometry in Occupations. Posters. J. Weston Walch , Publisher.

Math in Science and Technology. Posters. J. Weston Walch , Publisher.

Opportunities in Mathematics. Posters. J. Weston Walch , Publisher.

Sex Fairness in Career Guidance: A Learning Kit. ABT Associates, Inc.
Self-instruction package for becoming sensitized to sex bias and eliminating it in administering career guidance. Kit includes a four-chapter text manual, spirit masters, scenario cards for role plays, transcripts of counselor-client interactions, and a cassette tape of four simulated counseling segments, each with two versions--a sex-biased and a sex-fair approach to the same client.

10
PUBLISHERS

A

ABT Publications. 55 Wheeler St., Cambridge, Ma. 02138.

Addison-Wesley Publishing Co. Reading, Ma. 01867.

Aims Instructional Media Services, Inc. Box 1010, Hollywood, Ca. 90028.

American Personnel and Guidance Association (APGA). 1607 New Hampshire Ave., NW, Washington, D. C. 20009.

Arco Publishing Co. 219 Park Ave. South, New York, N. Y. 10003.

Association-Sterling Films. 866 3rd Ave., New York, N. Y. 10022.

Atheneum Publishers. 122 E. 42nd St., New York, N. Y. 10017.

AVI Publishing Co. Box 670, Westport, Ct. 06880.

B

Bailey Film Associates. 11559 Santa Monica Blvd., Los Angeles, Ca. 90025.

Bantam Books, Inc. 666 Fifth Ave., New York, N. Y. 10019.

Barron's Educational Series. 113 Crossways Park Dr., Woodbury, N. Y. 11797.

Beacon Press, Inc. 25 Beacon St., Boston, Ma. 02108.

BFA Educational Media. 2211 Michigan Ave., Santa Monica, Ca. 90404.

B'nai B'rith Career and Counseling Services. 1640 Rhode Island Ave., NW, Washington, D. C. 20036.

Bobbs-Merrill Co. 4300 62nd St., Indianapolis, In. 46268.

R. R. Bowker Co. A Xerox Educational Co. 1180 Avenue of the Americas, New York, N. Y. 10036.

Butterick Publishing Co. P. O. Box 1945, Altoona, Pa. 16603.

C

Career World Book Service. 501 Lake Forest Ave., Highwood, Il. 60040.

Career World Magazine. 501 Lake Forest Ave., Highwood, Il. 60040.

Catalyst. 14 E. 60th St., New York, N. Y. 10022.

CEBCO Standard Publishing. 104 Fifth Ave., New York, N. Y. 10011.

Chain Store Publishing Corp. 2 Park Ave., New York, N. Y. 10016.

Changing Times Education. 1729 H St., NW, Washington, D. C. 20006.

Children's Press. 1224 W. Van Buren St., Chicago, Il. 60607.

Chronicle Guidance Publications. Moravia, New York, N. Y. 13118.

Citadel Press. 102 Enterprise Ave., Secaucus, N. J. 07094.

Citation Press. 50 W. 44th St., New York, N. Y. 10036.

Clark Publishing Co. P. O. Box 205, Pocatello, Id. 83201.

College Entrance Examination Board. Princeton, N. J. 08540.

Counselor Films, Inc. 2100 Locust St., Philadelphia, Pa. 19103.

Coward, McCann and Geoghegan. 200 Madison Ave., New York, N. Y. 10016.

Crowell-Collier Press. 866 Third Ave., New York, N. Y. 10036.

Crown Publishers. 419 Park Ave. South, New York, N. Y. 10016.

Cummings Publishing Co., Inc. Menlo Park, Ca. 94025.

Current Affairs Films. 527 Madison Ave., New York, N. Y. 10022.

D

The John Day Co. 257 Park Ave. South, New York, N. Y. 10010.

Delacorte Press. 750 Third Ave., New York, N. Y. 10017.

Dodd, Mead and Co. 79 Madison Ave., New York, N. Y. 10016.

Doubleday and Co. School Library Division, New York, N. Y. 10003.

Doubleday Multimedia. Box 11607, 1371 Reynolds Ave., Santa Ana, Ca. 92705.

Drake Publishing Co. 381 Park Ave. South, New York, N. Y. 10016.

Dun-Donnelley Corp. 666 Fifth Ave., New York, N. Y. 10019.

E. P. Dutton and Co. 201 Park Ave. South, New York, N. Y. 10003.

DAVTE (Division of Adult, Vocational and Technical Education). 100 N. 1st St., Springfield, Il. 62777.

E

Eastern Illinois University. Charleston, Il. 61920.

Educational Projections Corp. P. O. Box 1187, Jackson, Mo. 39205.

Educational Research, Inc. 1768 Willow Point Dr., Shreveport, La. 71109.

Educators Progress Service. 200 Center St., Randolph, Wi. 53956.

Encyclopedia Britannica. 425 N. Michigan Ave., Chicago, Il. 60611.

M. Evans and Co., Inc. 216 E. 49th St., New York, N. Y. 10017.

Eye Gate House, Inc. 146-01 Archer Ave., Jamaica, N. Y. 11435.

F

Fairchild Publications, Inc. 7 E. 12th St., New York, N. Y. 10003.

J. G. Ferguson Publishing. 6 N. Michigan Ave., Chicago, Il. 60602.

Finney Co. 3350 Gorham Ave., Minneapolis, Mn. 55426.

G

Garrett Park Press. Garrett Park, Md. 20766.

General Learning Corp. Morristown, N. J. 08057.

Globe Book Co. 175 Fifth Ave., New York, N. Y. 10010.

Golden Gate Junior Books. 8344 Melrose Ave., Los Angeles, Ca. 90069.

Grosset and Dunlap, Inc. 51 Madison Ave., New York, N. Y. 10010.

Gulf Publishing Co., P. O. Box 2608, Houston, Tx. 77001.

Guidance Associates. Pleasantville, N. Y. 10570.

H

Harper and Row Publishers. 10 E. 53rd St., New York, N. Y. 10022.

Hastings House. 10 E. 40th St., New York, N. Y. 10016.

Hawthorn Books, Inc. 70 Fifth Ave., New York, N. Y. 10011.

Houghton Mifflin Co. 2 Park St., Boston, Ma. 02107.

I

Illinois Office of Education. 100 N. First St., Springfield, Il. 62777.

Imco. P. O. Box 185, Green Lake, Wi. 54941.

Interpretive Education. Division of Illinois Envelope Co. 400 Bryant St., Kalamazoo, Mi. 49001.

Interstate Printers and Publishers, Inc. 19 N. Jackson St., Danville, Il. 61832.

J

Janus Book Publishers. 25825 Mission Blvd., Hayward, Ca. 94544.

Charles A. Jones Publishing Co., Worthington, Oh. 43085.

Edward E. Judge and Sons. 79 Bond St., Westminster, Md. 21157.

K

King Features Educational Division. 235 E. 45th St., New York, N. Y. 10017.

L

Lerner Publications Co. 241 First Ave. North, Minneapolis, Mn. 55401.

J. B. Lippincott Co. East Washington Square, Philadelphia, Pa. 19105.

Lothrop, Lee and Shepard. 105 Madison Ave., New York, N. Y. 10016.

M

Macmillan Publishing Co., Inc. 866 Third Ave., New York, N. Y. 10022.

Mademoiselle Magazine. Box 3389, Grand Central Station, New York, N. Y. 10017.

Mafex Associates, Inc. 90 Cherry St., Johnstown, Pa. 15902.

Massachusetts Institute of Technology. Cambridge, Ma. 02138.

McGraw-Hill Book Company. 1221 Avenue of the Americas. New York, N. Y. 10020.

David McKay Co., Inc. 750 Third Ave., New York, N. Y. 10017.

McKnight Publishing Co. Route 66 and Towanda Ave., Bloomington, Il. 61701.

Julian Messner. 1 West 39th St., New York, N. Y. 10018.

Milady Publishing Corp. 3839 White Plains Rd., Bronx, N. Y. 10457.

Minehard Corp. 25 Fifth Ave., New York, N. Y. 10011.

Modern Talking Picture Service. 2323 New Hyde Park Rd., New Hyde Park, N. Y. 10040.

William Morrow and Co. 6 Hendricks Dr., West Caldwell, N. Y. 07006.

N

National Archives and Record Service. National Audiovisual Center. Washington, D. C. 20409.

National Directory Service. 252 Ludlow Ave., Cincinnati, Oh. 45220.

National Press. 285 Hamilton Ave., Palo Alto, Ca. 94301.

National Vocational Guidance Association. 1607 New Hampshire Ave., NW, Washington, D. C. 20009.

Nelson-Hall Co. 325 W. Jackson Blvd., Chicago, Il. 60606.

Thomas Nelson, Inc. Copewood and Davis St., Camden, N. J. 08103.

New Reader's Press. Box 131 Syracuse, N. Y. 13210.

Northern Illinois University. DeKalb, Il. 60115.

O

Office Publications, Inc. 1200 Summer St., Stamford, Ct. 06904.

J. Philip O'Hara, Inc. 20 E. Huron St., Chicago, Il. 60611.

Olympus Publishing Co. 937 E. Ninth South, Salt Lake City, Utah. 84105.

Outlook Publishers. 512 E. Main St., Richmond, Va. 23219.

Oxford University Press. 417 Fifth Ave., New York, N. Y. 10016.

P

Parent's Magazine Press. 52 Vanderbilt Ave., New York, N. Y. 10022.

Parker Brothers, Inc. Salem, Ma. 01970.

Pathescope Educational Films, Inc. 71 Weyman Ave., New Rochelle, N. Y. 10802.

Peterson's Guides, Inc. P. O. Box 123, Princeton, N. J. 08540.

Peterson Publishing Co. 8490 Sunset Blvd., Los Angeles, Ca. 90069.

Philadelphia Public Schools. Vocational Guidance Service. Philadelphia, Pa. 19104.

Pilot Books. 347 Fifth Ave., New York, N. Y. 10016.

Popular Science Audiovisuals. 5235 Ravenswood Ave., Chicago, Il. 60640.

Praeger Publishers. 111 Fourth Ave., New York, N. Y. 10003.

Prentice-Hall, Inc. Englewood Cliffs, N. J. 07632.

Public Affairs Pamphlets. 381 Park Ave., South, New York, N. Y. 10016.

G. P. Putnam's Sons. 200 Madison Ave., New York, N. Y. 10016.

R

Henry Regnery Co. 114 W. Illinois St., Chicago, Il. 60610.

Richards Rosen Press, Inc. 29 E. 21st St., New York, N. Y. 10010.

S

Howard W. Sams and Co., Inc. Indianapolis, In. 46268

W. B. Saunders, Subsidiary of Columbia Broadcasting System. 218 W. Washington Square, Philadelphia, Pa. 19105.

Scholastic Book Services. 50 W. 44th St., New York, N. Y. 10036.

Science Research Associates. 259 E. Erie St., Chicago, Il. 60611.

Charles Scribner's Sons. 597 Fifth Ave., New York, N. Y. 10017.

Sears, Roebuck and Co. Consumer Information Services. Sears Tower, Chicago, Il. 60684.

Sheed, Andrews and McMeel. 6700 Squib Rd., Mission, Ks. 66202.

Simon and Schuster, Inc. 630 Fifth Ave., New York, N. Y. 10020.

Society for Visual Education. 1345 Diversey Pky., Chicago, Il. 60614.

South-Western Publishing Co. 5101 Madison Rd., Cincinnati, Oh. 45227.

Southern Illinois University. 1008 S. Thompson St., Carbondale, Il. 62901.

T

Troll Associates. East 64th Midland Ave., Paramus, N. J. 07652.

U

U. S. Bureau of Customs. 2100 K St., NW, Washington, D. C. 20226.

U. S. Bureau of the Census. Public Information Office. Department of Commerce. Washington, D. C. 20233.

U. S. Civil Service Commission. 1900 E. St., NW, Washington, D. C. 20415.

U. S. Department of Agriculture. Fourteenth St. and Independence Ave., SW, Washington, D. C. 20250.

U. S. Department of Commerce. Fourteenth St. between Constitution Ave. and E St., NW, Washington, D. C. 20230.

U. S. Department of Health, Education and Welfare. 330 Independence Ave., SW, Washington, D. C. 20201.

U. S. Department of the Interior. C St. between 18th and 19th Sts., NW, Washington, D. C. 20240.

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U. S. Environmental Protection Agency. 401 M St., SW, Washington, D. C. 20460.

U. S. Government Printing Office. North Capitol and H Sts., NW, Washington, D. C. 20401.

U. S. Small Business Administration. 1441 L St., NW, Washington, D. C. 20416.

V

Valiant, Inc. 237 Washington Ave., Hackensack, N. J. 07602.

Visual Materials, Inc. 2549 Middlefield Rd., Redwood City, Ca. 94063.

Vocational Biographies, Inc. Box 146, Sauk Centre, Mn. 56378.

Vocational Films. 111 Euclid Ave., Park Ridge, Il. 60068.

Vocational Guidance Manuals, 620 S. Fifth St., Louisville, Ky. 40202.

W

J. Weston Walch, Publisher. Portland, Me. 04104.

Watson-Guptill Publications. Division of Billboard Publication. 1 Astor Plaza, New York, N. Y. 10036.

Franklin Watts, Inc. 845 Third Ave., New York, N. Y. 10022.

Webb Co. 1999 Shepard Rd., St. Paul, Mn. 55116.

Westinghouse Learning Corp. 100 Park Ave., New York, N. Y. 10017.

Westminster Press. Juniper and Walnut Sts., Philadelphia, Pa. 19107.

John Wiley and Sons. Wiley Dr., Somerset, N. J. 08873.

The H. W. Wilson Co., 950 University Ave., Bronx, N. Y. 10452.

Winchester Press. 460 Park Ave., New York, N. Y. 10022.

Writer's Digest. 9933 Alliance Rd., Cincinnati, Oh. 45252.

Peter Wyden, Inc. 750 Third Ave., New York, N. Y. 10017.